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Company relationship networks in Hungary

Motives of long-term market relationships

Ph.D. Dissertation

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Introduction

The changes that affected numerous areas of business life in recent decades have intensified competition and pushed firms towards increasing the efficiency of their resource and activity allocation. Firms can only meet the diverse challenges that arise in numerous areas if they explore existing competencies that are sources of competitive advantage for them, and acquire such new competencies by developing them in-house or by forming various relationships with other players. Interfirm relations between various organisational units or in the same sector and co-operations with players from other sectors are significant resources that enhance the competitiveness of companies. Such relationships involve rivalry and co-operation at the same time, thus promoting the exploitation of new technologies, an increase in efficiency, the better use of human resources, and the improvement of the firm's performance in the innovation race. It seems that while the 20th century was the century of companies, the 21st century will be the era of company networks. All this means that in company practice and in various fields of business sciences the image of the isolated company competing alone in the market has been supplemented and replaced by another image where companies co-operate and form partnerships. These changes prompted numerous theoretical studies in the area of organisational theory and strategy management, to name only two. These concluded that in addition to lowering competitive uncertainty and resource dependence, interfirm relations also serve as information channels, useful management tools and cost control tools (Burt, 1992).

The present research is very relevant as the evolution of interfirm relations is of great significance for the Hungarian economy. Realigned networks of the newly formed market economy determine the development of the Hungarian economy and by influencing the competitiveness of the business sector they also affect the country's operation within the economy of the European Union. The forms of interfirm relations and their fit with international tendencies are characteristic of each country's economy. A close and organic connection with the external economy and the formation of relationships that are natural extensions of the

operation of the world economy are fundamentally important for Hungary's economic development (Chikán, 1997).

The increasing importance of the make or buy question, which was originally linked to production strategy development, underlies the network approach. As the role of interorganisational relations rose to prominence the make-buy question was transformed into a *make, buy or co-operate* issue, and it now appears as an important decision criterion in company strategy development. When implementing strategic goals, in addition to considering their own activities, companies also place into a wider context the activities they wish to perform themselves, to buy from others or to carry out in co-operation with other players, in accordance with the requirements of environmental complexity. This extended approach is reflected by the *supply chain*[1], which provides value to the final consumer by linking various company activities and value chains. As the company value chain connects to the supply chain via suppliers and buyers, the other approach relevant for the paper is *relationship marketing*[2]. The paper looks at network relationships from a strategic management perspective, and reflects the same approach as the two aforementioned concepts, which appear in the paper, but without the aim of giving a detailed explanation. The underlying question for all three approaches is how organisational boundaries can be dismantled to be replaced by various relationships in order to promote the successful implementation of company strategy.

Research objectives

The objective in the theoretical part of the paper is to outline contributions to the technical literature and to present the theoretical framework of network relationships, focusing primarily on the strategic management approach. In line with this, the focus of the empirical research is the motivators of long-term market relationships, which are the basic units of company relationship networks. The reason for selecting this research topic was that long-term market relationships (supplier and client relationships) are the direct link between companies and the players of the supply chain, and they exert a significant

[1] See J. Gattorna (1998) for further writings in this topic
[2] See T. Mandják (2002) for more details

influence on the core activities. The long-term nature of co-operations is indisputably important for the stability of network relationships.

In the course of the empirical research, I examined *three interrelated issues*:

1. Factors motivating Hungarian companies to form long-term market relationships and the changes in these factors;
2. Factors causing differences in the motivators of long-term market relationships;
3. The links between motivators of long-term market relationships and company performance.

The primary focus of the *first area of study* is to determine the factors motivating Hungarian companies to form long-term market relationships and to analyse changes. I have also analysed the role of various relationship types within company networks in the implementation of company strategy, and the factors linked to the success of business ties.

The descriptive analysis exploring the business relationships of Hungarian companies also serves as a starting point for examining the *second and third issues*, which relate to uncovering causal relationships. I hypothesize that the relationships of companies having different ownership structures, different positions within the industry, operating in varying sectors and following different company strategies are motivated by different factors. I examined factors motivating long-term market relationships by comparing various company subsamples. The subsamples were determined following the environment-strategy-performance logic of the contingency theory. Thus I compared company subsamples where the industry position, the sector, the dominant owner and the strategic goals were different. By investigating and finding the links between these factors and the motives we can greatly enhance our knowledge of factors influencing the formation of network relationships.

The third issue studied in this paper concerned the differences in performance between companies with different motives. In this section I compared groups of

companies with different motives for forming business relationships in order to map the links between company performance and factors motivating long-term market relationships. The link is relatively easy to see logically, but little previous experience existed to help a practical examination. I regarded it important to include this issue in the analysis, as according to one of the premises of the research the formation and operation of interfirm relationships are important in improving company performance. In order to develop relationships we must understand the causalities in the operation of companies, and the links between elements of performance and partnerships. The exploration of these links can help in forming long-term market relationships that contribute to improving company performance.

The empirical study is fundamentally quantitative, and is based on the results of the survey conducted in the framework of the *Competitiveness research* programme. The Competitiveness research database allowed the monitoring of changes over time as well, since the 1999 survey was repeated in 2004, with minor changes to the questionnaire. I focused on exploring the current situation, therefore the analyses are based primarily on the data from 2004, but I also included an analysis of the changes. The first results of the Competitiveness research in 2004 supported my research, because they showed that 55% of respondents stated that their business success was greatly dependent on the partners they co-operated with in the supply chain (Chikán – Czakó – Zoltay, 2004).

Structure of the dissertation

Chapter one summarises environmental factors that contribute to the emergence of networks and to strengthening them, and presents internal company processes.
Chapter two describes the characteristics of dyadic partnerships as the basic units of networks, and the various ways of typifying company networks.
Chapter three gives an overview of theoretical approaches to company relationship networks. Yet again, the main focus is on approaches linked to strategic management.

Chapter four presents, based on international experiences, the theoretical concepts and the directions of research in this field.

Chapter five, titled *Hungarian context of company networks*, summarises the development of network relationships in Hungary and the studies conducted in this field.

Chapter six describes the research method. After stating the hypotheses in the three areas of study I presented the methodological characteristics and the research map.

The results of the research programme are summarised in *chapter seven* first by following the logic of the analyses in the three areas of study, then by examining the hypotheses in detail, and finally the chapter also gives recommendations concerning future research options.

1. Emergence of company networks

There are several possible answers to the question of what causes organisations, organisational units to form networks and to create lasting relationships with each other. These pressures are naturally not independent of one another. The motivation is usually external and generated by the market environment, i.e. they may be responses that companies give to environmental changes. It is for certain, though, that today the emergence of networks, as a manifestation of interaction between economic players, can be considered to be a fact of life. Below we will present the most important causes promoting the development of company networks. Among the causes we will first deal with external environmental changes and then we will summarize the reactions of companies.

1.1. Turbulence of technological development, rapid changes in the technologies used

As the interval between the appearance technological innovations is getting shorter, we can observe the tendency of product life cycles getting shorter and the frequency of new products and services appearing on the market rising. Paralelly the incentive for companies to innovate is getting stronger in order to remain competitive. The *shortening of the innovation period* increasingly overstretches the scope of individual organisations, and thus promotes strategic co-operations in which companies share the burdens arising from the shortening of the new product development phase. Second, there is mounting pressure to adopt advanced technologies in cases where complementary technologies are also needed. (Camagni,1991). Often the development of specific technologies can only progress when the complementary technologies have already been mastered. The third, closely related reason why the increase in the number of partnerships can be linked to a general trend is that the current wave of technological innovations arises less from applying single inventions, but rather from integrating variations of various new products and procedures into new systems. This growing demand for systemic integration encourages other

companies as well to set up a common system or to implement common directives. In the past, large companies which were unable to develop particular competencies alone acquired it through buying another company which possessed the necessary competencies. In recent years few reports have appeared on mergers and acquisitions in the field of cutting-edge technology, and company relationship networks have taken their place. (Doz, 1988).

1.2. Globalisation versus locatisation

The phenomenon of globalisation creates on one hand an opportunity and also a pressure for companies to find the best place and method of performing an activity, and on the other hand the differences in access to resources and opportunities to sell possessed resources and competencies create different possibilities for companies to participate in the global economy. Multinational companies establish their own networks of subsidiaries via investing foreign working capital, thus connecting the most efficiently acquired resources from all parts of the global economy (Bayer – Czakó, 1999). Regional companies concentrate their activities on given regions in order to achieve the previously mentioned efficiency criteria. Local companies can join the bloodstream of the world economy either by participating in the supplier network of global companies or by joining the network of companies that are adapted to local characteristics and serve the local market. We can see that one of the economic trends today is globalisation, manifesting itself in the emergence of multinational companies, and we can also observe a localisation process, favouring the development of smaller geographical regions and local specialities.

1.3. Uncertainty, risk reduction

The rapid and often unpredictable changes in the economic environment have changed the dimensions of competition as well. Companies do not only compete with their products and services, but also in the field of capabilities needed to produce them. More and more, collective activities, where subactivities are able to change flexibly, seem to be the way to achieve continual renewal of these capabilities. Strategic co-operations spread with unprecendented speed, which is due, among other things, to *companies attempting to reduce risk*. In an earlier period companies followed the strategy of vertical integration to enjoy the benefits of risk reduction. A classic example of vertical integration is Ford Motor Company, which became a veritable empire with ore fields, coal mines, 70 hectares of forests to produce timber, sawmills, foundries, glass factories, barges transporting ore and coal and a railway (Williamson, 1985). This strategy of vertical integration proved to be very successful when technological changes were relatively slow, the production process was transparent and standardised, and similar products were produced in large numbers. Today, we have to face the fact that vertical integration on such a wide scale has serious weaknesses: inability to react quickly to the competitive changes in international markets; inability to develop innovative solutions to change the relations between various stages of the production process; and relative unwillingness to introduce new products (Mariotti – Cainarca, 1986).

Due to the weakness of vertical integration the share of in-house production is decreasing and firms increasingly rely on external suppliers. Industrial researchers and practising experts consider the Japanese practice to be the model, where only a small proportion of products are produced in-house, and masses of products are obtained through a dense network of subcontractors. In a way, Japanese companies can be looked upon as the pioneers of a strategy, which entails a firm rejection of vertical integration. The Japanese car industry, for example, produces only 30% of the parts in-house, as compared to 45% in Europe and 70% in the USA (Ikeda, 1988).

1.4. Efficiency criteria: cost cutting, expanding resource restrictions

An important motivation of network co-operation is that it reduces costs. This in itself is sufficient motivation, as in the nineties the most characteristic feature of company management was the improvement of efficiency through cost cutting. The most visible manifestation of this was the cutting of human resource costs, but the reductions in capacities and the outsourcing of various supporting activities were also carried out to cut costs. In this way companies serving several clients within the network are usually able to obtain the necessary inputs in greater quantity and at a cheaper price. Clients benefit from being able to acquire a product or service needing specialised knowledge more eficiently, since it is produced by a player that is using its core competencies. The transaction cost theory, which we will detail later, also explains the development of networks by cost reduction.

1.5 Profitability as the main strategic goal

With respect to the fundamental goal of companies – "satisfaction of consumer needs while achieving profit" (Chikán, 1997:16) – we can say that all company decisions and subsequent actions should reflect this goal. Strategic goals are governed by this principle, and thus, they are primarily dependent on the environment. Therefore, if the most effective method of adapting to the environment is co-operation between companies, then this means that the main motivation thereof is to maintain profitability of companies. Companies co-operate, enter networks in order to reduce their costs, improve the efficiency of their activities, to share risks, etc., and thus to improve their own profitability in the longer run. We can say, therefore, that the most common reason for the development of networks is the maintenance of profitablity (Kocsis – Szabó, 2000).

2. Intercompany relationships and company networks

In this chapter I will first describe the characteristics of partnerships, which form the basic units of networks, and then I will typify company networks based on different attributes.

2.1. Strategic business relationships

First we will review partnerships, which are fundamental units of company networks, and the characteristics of partnerships. As networks are created through co-operations between economic players, it is important to determine the characteristics of network relationships. Based on the transaction cost theory, relationships between companies range between the extremes of the market and of the hierarchy (Coase, 1937; Williamson, 1975). One of the extreme forms of co-operation is pure market co-ordination, when the parties take part in a one-time exchange, where, even if the transaction is repeated several times. The other extreme is hierarchy, when activities are completely integrated. Between these two extremes companies have several other co-ooperation possibilities[3]. These dyadic relationships of strategic significance to the firm, also called hybrid forms, are the fundamental units of strategic networks. They include strategic alliances, joint ventures, buyer-supplier relationships, licencing, outsourcing and a range of similar relationships.

Interfirm relationships make it possible to access new technologies or markets in a powerful way; to provide a wider range of products or services; to achieve economies of scale through joint research and/or production; to acquire knowledge beyond the borders of the firm; to share risks; and to access complementary capabilities and thus improve the implementation of the competitive strategy. Following this logic Gulati views alliances as voluntary agreements, which involve the exchange, sharing and joint development of

[3] The expressions intercompany relationships, forms of relationships, partnerships, business relationships, co-ooperations, alliances, network relations are interpreted and used as synonims.

products, technologies or services. They may have a wide range of motivations and goals, appear in numerous forms, and may break vertical and horizontal boundaries (Gulati, 1998).

According to Yoshino and Rangan, who researched strategic alliances, the necessary and sufficient requirements for strategic alliances are: (1) two or more companies that join forces to achieve jointly set objectives, remain independent after the alliance has been set up, (2) advantages and performances are divided among the parties, (3) the contribution of participants is continuous in one or more strategic areas of key importance (technology, product development etc. (Yoshino – Rangan, 1995)).

Strategic decisions are the most important decisions in the life of an individual, an organisation or an institution. They are characteristically irreversible and launch processes, which can only be modified at a very high cost. Examples of these are relationship-specific investments, which are undertaken to gain or keep a partner (Barakonyi – Lorange, 1994; Bensaou, 1997). What makes a partnership *strategic* then? A business relationship may be called strategic if it contributes significantly to the strategies of the partners, and involves the gathering and linking of necessary competencies. Consequently, the differences of network relationships are fundamentally determined by how they contribute to the implementation of the firm's strategy. The strategic partnership therefore is a broad term, as the different forms of co-operation in the market-hierarchy continuum all possess individual features. In order to demonstrate this, we shall present the definition of strategic alliances developed by Tari and Buzády, who examined Hungarian companies that have entered into alliances. The authors analysed the most important characteristics of these companies. Their questionnaire included a description of what forms of co-operation the interviewees should regard as strategic alliances (Tari – Buzády, 1998).

They used the following system of criteria:

1. The partners retain their relative strategic independence and market segments.

2. The partners establish a longer term and comprehensive co-operation, which results in mutual benefits.

3. The partners integrate their activity through sharing assets and know-how, i.e. they put certain resources at the disposal of the alliance.

4. Other forms of co-operation, which do not satisfy the three criteria mentioned above, cannot be considered as "strategic" or as an "alliance".

We can see that these characteristics narrow strategic partnerships down to strategic alliances. Although strategic alliances are an element of network relationships, their characteristics are only applicable to this form of co-operation. Therefore we can say that a researcher exploring a certain form of relationship is justified to assume that the form of co-operation under examination only connects specific parts of the business activity. When investigating networks it is practical to emphasise the common characteristics of co-operation, then to narrow the picture based on the focus of the investigation.

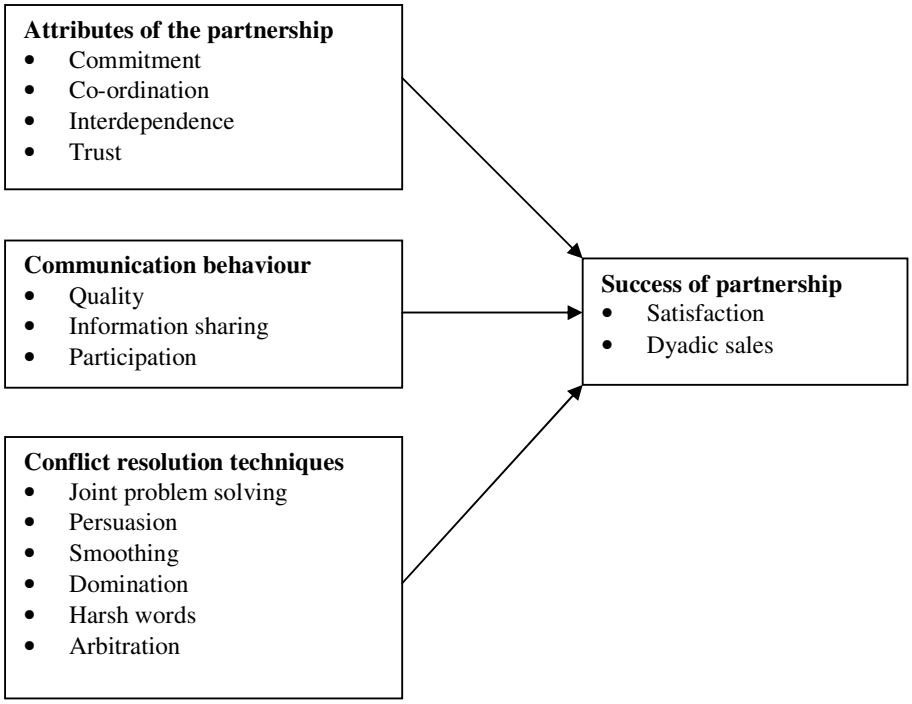
Looking at network relationships from a strategic perspective "partnerships can be defined as purposive strategic relationships between independent firms, who share compatible goals, strive for mutual benefit and acknowledge a high level of mutual interdependence" (Mohr and Spekman, 1994:135). They make joint effort to reach goals that would be difficult to reach alone. Strategic business relations blur the boundaries between companies, as very close relationships evolve between the partners. There relationships are characteristically long term and result in interlinked partners, which also serves to decrease the possibility of opportunistic behaviour.

While business relationships are often regarded as magic medicine to cure the ailments of individual companies, and co-operation is viewed as the recipe for gaining competitive advantage, it is often overlooked that many

strategic partnerships are not successful. When the development of partnerships is approached in this way, the related disadvantages and risks are often overlooked. Such disadvantages and risks may include the increase in complexity, loss of power and asymmetrical information exchange. Therefore it is important to know what factors are associated with the success of a business relationship, but they are not the only determinant factors in selecting the partners or in the management of existing partnerships.

Based on this contradiction one is justified in asking the question: what factors determine the partnership success? Based on previous theories and studies, Mohr and Spekman developed a "partnership success model". The premise of the model is that while the durability of such relationships is generally deemed to be the main indicator of success, it does not necessarily grasp the essence of success, as some relationships are terminated deliberately after a given time period (Hamel et al, 1989). In their model they use two indicators of partnership success: one objective indicator (sales volume flowing between the partners) and an affective measure (satisfaction with the other party). The rationale for the objective indicator is that strategic relationships are established to achieve certain goals, to increase the competitive power of a firm. The affective indicator (satisfaction) is based on the concept that success is in part determined by how well the partnership manages to satisfy the performance expectations of the partners (Anderson – Narus, 1990). Satisfaction is achieved if the performance expectations are met.

Figure 1
Factors associated with partnership success



Source: Mohr J. and Spekman R. 1994: 137.

Strategic business relations therefore possess features that differentiate them from more traditional business relations. More successful partnerships, exhibit these features with greater intensity than less successful relationships. These features include the attributes of the partnership, such as commitment, trust, communication behaviour, information sharing between the partners and conflict resolution techniques, which tend towards joint problem solving rather than domination or ignoring the problem (Borys - Jemison, 1989). The most important criterion of strategic partnerships, therefore, is that the parties regard the success of the given relationship important in implementing their own strategy, and treat the partnership accordingly. In company networks firms have to manage a portfolio of business relations, establishing the appropriate relationship characteristics for each relationship.

2.2. Types of company relationship networks

Strategic partnerships between companies possessing the previously presented characteristics constitute the basic unit of relationship *networks*. Based on the examination of dyadic level co-operations, the term network interprets relationships between companies as a system of multilateral co-operation. In economic models today groups of companies, networks are increasingly accepted as the fundamental units of the economy rather than companies. Depending on one's viewpoint and the context of the examination, different approaches to networks and interpretations thereof are created. The network types determined based on the different approaches are not clear-cut formations. When classifying types some similarity can be demonstrated with various types of dyadic relationships; this is especially true of various types of strategic alliances, but the correspondence is not unequivocal. The reason for this is that networks consist of various types of partnerships, which are difficult to describe with the same characteristics. Taking all this into account, a lot of possibilities arise to determine and examine different types of networks, depending on the subjectivity of the researcher/theorist. We can talk about networks of relationships developed by a given company, networks of company relationships operating in a given industry, networks based on geographic location, networks of companies based on common ownership, networks organised along supply chains etc. In the next section we will introduce the most important network-related terms created by various studies with different approaches and focuses.

2.2.1. The basic tripartite interpretation of the network concept

"In its most *general* use, the term "network" refers to the structure of ties among players in a social system" (Nohria - Eccles, 1992a:288). These players can be functions, individuals, organisations, industries or even nation states. The ties can be based on discussion, impressions, friendship, kinship, prestige, economic exchange, information exchange or anything else that

can serve as a basis for the relationship. Looking at it this way, in a broader sense, the structure of any social organisation can be interpreted as a network. This approach is of most interest to sociologists and organisation sociologists who focus on informal networks between individuals, i.e. networks without a legal or institutional framework. When networks are analysed from a sociological perspective, collaboration is looked at as networking between individuals – members of separate organisations and within one single organisation (Steward - Conway, 1996).

Recently two clearly distinct notions narrowing the concept of networks have come to the forefront. Both are central to what developed economies portray as the transition from the industrial society to the postindustrial society. One of the meanings of the word network refers to the *new type of ideal organisation*, which is radically different from Weber's bureaucracy, and is characterised by relationships that are not based on hierarchical power or market transactions. Those who use the expression in this sense see the evolution of this new network organisational form as the result of accelerated environmental change, which is creating greater uncertainty and information-editing expectations (Baker, 1992; Miles és Snow, 1986; Powell, 1990). There is no consensus about the analytical character of network organisations, or even about the technical term. Yet those who claim the appearance of this new organisational form, all emphasise its network-like features, i.e. the flexible relationship patterns based on mutual co-operation, which cross intra- and interorganisational boundaries. In case of networks, this new type of organisation actually means *interorganisational networks*, where the members of the network agree to partially perform their dealings, exchanges among themselves. At the same time, network participants do not wish to blend into a totally integrated organisational hierarchy with one single decision centre, or to perform their co-ordination operations in accordance with the internal rules of a monolithic organisational-ownership-based unit (Grandori - Soda, 1995; Ebers, 1997; Doz - Hamel, 1998).

In line with this approach, the network concept of the dissertation is closest to Gulati's definition, who defines networks as a collection of organisations. This can also be considered as a type of network organisation, according to which a network is "a group of independent firms tied together through multiple links of alliances to achieve a common purpose" (Gulati, 2001). Specific make-up is only discussed in relation to given companies and their co-operative partnerships. A company network can consist of several types of interfirm co-operations. A network, therefore, is a system of interfirm relationships, co-operations that creates more value than its parts put together. This concept is linked to one of the key concepts of strategic thinking, the use of synergies, which can now be extended beyond the boundaries of the firm through the co-operation of firms.

The other narrower meaning of "network" refers to new *organisational methods* that have appeared due to the development of information and telecommunication technologies (Forester, 1987). According to this interpretation of the network concept, there is no need for face-to-face interaction anymore, only for advanced information technology. The network organisation becomes an expanding and living electronic network, which links company employees with their customers, sellers and strategic partners. According to the critics of this approach, network organisations are not identical to electronic networks, nor do they build on them entirely. This is because electonically performed exchanges will not be as efficient as face-to-face exchanges. In their opinion daily operation is hard to handle only electronically and human relations are needed in efficient network organisations.

The network – whether it functions as an organisation or as a collective of organisations – is definitely different, or rather more than a market exchange network or an organisation with strict hierarchy. A characteristic of networks is cohabitation and cooperation, long-term commitment and shared value system of network constituents, their mutual influence on each other and constant interaction (Gerlach, 1992; Jarillo 1995). Because of its management science approach, the paper looks at networks as collectives of organisations, and classifies networks using this approach, taking into

consideration various aspects. These aspects relate to organisational boundaries, which are typified most comprehensively, but not without obscurity and overlaps, by Ashkena and co-authors (1995). *Boundaries of organisations* are grouped into four categories: (1) *vertical* – boundaries between hierarchical levels, (2) *horizontal* – boundaries between company functions, organisational or business units, (3) *external* – boundaries between the organisation and suppliers, buyers, competitors and other parties, (4) *geographical* – boundaries between organisations, countries, cultures and markets. Therefore, the categories below do not decribe mutually exclusive types, they merely try to make the concept of networks more tangible by narrowing the concept from a certain aspect.

2.2.2. Differentiation of networks by ownership

Perhaps the most comprehensive classification of networks is the classification based on *external and internal networks*. *External networks* are systems of relationships between independent organisations with different owners, while *internal networks* develop within large firms or organisations made up of quasi-autonomic units and subsidiaries. Characteristically multinational companies and company groups concurrently establish external networks (e.g. by initiating strategic alliances or by creating a local supplier network) and internal networks via their subsidiaries operating in domestic and foreign markets (Yoshino – Rangan, 1995, Szanyi – Tari, 2000).

The big group of external networks includes networks consisting of the above mentioned horizontal and vertical relations, regional and global networks, and other special relationship forms, such as toll work, franchising or licencing. In the other comprehensive group of networks market elements integrate into hierarchies: this is the gradual transformation of large companies with integrated activities into *internal networks*, where internal units with a high level of independence are linked to the market in the most direct

way possible, and at the same time the activities of the units also produce an aggregate synergistic result and are intertwined within the framework of the company group (Bötther, 1995; Bartlett – Ghoshal, 1999). Today, concerns are a characteristic form of internal company networks emerging from a loose grouping of divisions and subsidiaries. A concern is a group of independent companies – legally independent as well – who cooperate in an industry or several industries in order to act jointly in the market, to use development resources effectively, to optimalise capital allocation and to have a co-ordinated product and technology policy (Dobák – Tari, 1997). The two main components of the concern organisation as a network are the ”head unit” and the ”basic units”. The head unit manages the concern as a whole, while the basic units perform the manufacturing, commercial and service activities belonging to the operating profile of the concern. Depending on what specific functions are included among their managing-directive responsibilities head units are categorised as ”parent-company concerns” and ”holding concerns”. In the case of a ”parent-company” concerns the mother company operating under the direct management of the head unit also manufactures products or provides services for external commercial partners, while the head unit manages the concern with respect to the subsidiaries. In a holding concern the head unit deals only with the management of the concern (as a legally independent organisation, a holding company) – performing primarily strategic-financial tasks – and manufacturing and/or service provision activities are the exclusive responsibility of the subsidiaries of the internal network (Szanyi - Tari, 2000).

2.2.3. Network types by direction of network development

Regarding networks one basic classification possibility is to look at the *direction* of network development. Direction actually refers to direction within the industry or the crossing of industry boundaries. We can differentiate: (1) network of equal partners (or almost equal in power and competitive position), (2) network building initiated by the company in the focus

of co-operations (Child - Faulkner, 1998; Szanyi - Tari, 2000; Kocsis - Szabó, 2000).

In the case of networks falling into the first category network development occurs within the industry; its direction is horizontal, i.e. it is characterised by lasting co-operation between large companies or between small and medium-sized enterprises. Another term for these is non-nodal networks. Typical examples of this are networks built on strategic alliances between competitors, e.g. partnerships between large corporations; the widely split co-operation agreements among the largest car manufacturers of the world fall into this category.[4]

Networks belonging in the second category focus on preceeding and subsequent activities in the activity chain: usually develop when a relatively large, vertically integrated firm wishes to reduce its operating costs by outsourcing strategically less important activities and having them performed by other organisations. A typical manifestation of networks created by outsourcing are supplier and distribution networks based on vertical partnerships. Networks that develop along these lines are also called *vertical* networks (Gulati, 2001). Such networks aim to benefit from dynamically complementing large and small companies. This model is of particular importance in the biotechnology industry where large chemical corporations with financial and market power form relationships with new business ventures and small companies that possess entrepreneurial commitment and have experience in the new field of biotechnology (Olleros – Macdonald, 1988). These two forms of co-operation contribute to the process of firm and industry globalisation. Other authors call these two types: (1) lateral network development, and (2) top-down network development (Kocsis - Szabó, 2000). However, in the second case, network development can occur in the opposite direction as well (bottom-up) when partner companies establish a network to carry out distribution activities.

[4] See for example Tari - Buzády (1996) for more details on the latter.

2.2.4.Geographical differentiation

Networks can also be classified geographically, allowing us to differentiate *regional and global networks*. Regional networks constitute a particular form of cooperation between organisations, in which players are local companies operating in various industries and the government organisations, financial institutes, research institutions etc. of the region (district, county, province). In regional networks business and non-business units are intensively linked by flexible technologies, shared infrastructure, cooperation in activities and informal ties (Maillat, 1993; Kocsis - Szabó, 2000, Szanyi - Tari, 2000). One of the best known examples of this is the network in the Modena region, where most companies centre around a particular, small area, according to their products. Production is realised through widespread, co-operative subcontractor agreements, using a wide network of outworkers (Lazerson, 1993). All such networks display a specific information structure in accordance with local features, whether on a financial, production or scientific level. In this sense, national and regional networks themselves are expressions of social knowledge. The competitive power of a company partly depends on the nature of the relationships formed with other companies and institutions. As time goes by, companies acquire assets of their own, such as knowledge of where certain technologies or buyers are to be found, what co-operation is possible when developing new products, or who to create external ties with, and this knowledge is primarily linked to the region where they are located (Kogut et. al, 1993). The development of global networks is due, on one hand, to the emergence of regional business networks that cross national borders and, on the other hand, to the fact that today groups of companies rather than single companies compete with each other on a global scale. The emergence of allied groups of companies is prompted by the intensification of global competition due to the development and adoption of new technical standards (Gomes - Casseres, 1994).

2.2.5. Clusters as networks

In his book titled "Competitive Advantage of Nations" Porter (1990) presented his theory of national, state and local competitiveness in the context of the global economy. This theory assigns a primary role to clusters, which can be viewed as a type of regional networks. "Clusters are geographic concentrations of interconnected, companies, specialised suppliers, service providers, firms in related industries and associated institutions (for example universities, standards agencies and trade associations) in particular fields that compete but also co-operate" (Porter, (1998:197). Clusters are a critical mass of unusual competitive success created in certain areas of business. They are characteristic of almost all national, regional, state or even municipal economies, especially in economically more developed nations. Clusters can have different sizes, scopes of activities and levels of development. The differences in the nature of clusters arise from the structural differences of the participating industries, and depend on the strategies of the companies and the fields of competition.

Based on the definition, clusters have three basic characteristics in common (Steiner, 1998; idézi: Grosz, 2000:45). The first is strong specialisation based on a *sophisticated division of tasks*, which relies primarily on close supplier relations. These cooperations range from the simplest supplier relations to the transfer of knowledge by research institutes and business organisations or cooperation between companies and various organisations involved in economic development. The second common characteristic, and also the most important prerequisite of clusters, is *geographical proximity*. Strong geographical concentration provides the geographical dimension of clusters, which is indispensable for the competitiveness of the participants. The two factors, i.e. the concentrated geographical location of the companies and the related organisations and the close cooperation between them lead to *synergistic* effects. This also means that the favourable effects do not only provide significant economic advantages to those within the cluster, but that the competitiveness of the whole region is improved through better productivity, economic stability and economic growth. Clusters, therefore,

provide significant competitive advantages to participating companies without a loss of flexibility. This is usually only achieved by larger companies that increase their competitiveness by stimulating the spread of innovation and promoting the creation of new business ties.

It is important to see that the described network types or approaches to networks are only various aspects of networks. The diversity of approaches and terms, the divergence of content all show that there is no unified network model, which largely reflects the experience that all network organisations are different. All networks are initiated and shaped by the industry characteristics, the strategic behaviour of the companies, local features, conditions and other factors. What we can state as a common characteristic is that networks as organisations fundamentally differ from market networks based on a simple division of tasks and exchanges. Co-operating organisations do not necessarily form a network. Networks entail frequent and versatile business ties, mutual dependence, mutual and lasting commitment, reciprocity, trust and shared values (Grabher, 1993).

3. Theoretical approaches to networks

In this chapter I will present the theories that form the background to network research, primarily based on the perspective of the core disciplines of strategic management.

3.1. Strategic management schools

Within strategy research, studies of the organisational characteristics of various strategies, which focus on the particular configurations of structures, systems and processes supporting the strategy, represent an important topic (Miller, 1986). Researchers, however, have dealt much less with how strategy influences the firm's relationship with other organisations. The reason may be that at first the topic of international relations was more the focus of organisational theory experts rather than strategy researchers. Representatives of organisational theory usually did not consider strategy to be a determinant factor in the development of these relationships. However, as firms create more and more partnerships with other organisations for the purpose of acquiring markets and technologies it is increasingly obvious that these relationships are of growing importance in competitive strategy and organisational operation. Therefore the pressure on companies to retain harmony between strategy and internal structure requires a fit between strategy and external relationships as well.

In the field of strategy research one of the important questions asked is why do the behaviour and profitability of companies differ? While looking for the answer to the question, researchers investigated companies as autonomic units as they fought for obtaining competitive advantage either from external industrial sources (Porter, 1980) or with the help of internal resources and capabilities (Barney, 1991). However, the concept of companies fighting for profit alone in an impersonal market is less and less able to stand the test, as companies are embedded in social, professional and exchange relationship networks and co-operate with other organisational players

(Granovetter, 1985). There is a growing volume of research literature in the field of strategy that recognises that the strategic relationships of companies and their participation in networks have economic consequences. The research on joint ventures (Harrigan, 1985; Kogut, 1988) was one of the first in this field to monitor systematically the tendency of developing interfirm relationships. This significant and growing research tradition in the field of strategic management proves the importance of interfirm relations within the conversation of strategic management in general, and calls attention to need for coalescing and focusing studies in this field.

3.1.1. Mintzberg's schools of thought

The above also show that strategic thinking can be linked to various fields of research as well as phenomena investigated by other scientific areas, and it does not refer to a uniform school of thought. Mintzberg (1990) identified nine schools of thought in the field of strategic management. He uses the term school of thought to mean the range of ideas crystallised in the field of strategic management, linked to a specific grop of researchers. In this context a school of thought can be regarded as an institutionalised paradigm. The schools of thought identified by Mintzberg are the following: *prescriptive* schools of thought, namely (1) design, (2) planning, (3) positioning schools; and *descriptive* schools, which include both schools that conduct analyses on the level of individual organisations, called (4) entrepreneurial, (5) cognitive and (6) learning schools, and schools that conduct research on the level of the organisation-environment, called (7) cultural, (8) political, (9) environmental schools. These schools all have distinct characteristics depending on which discipline they base their approach on, how they relate to the environment and other attributes.

Table 1

Mintzberg's nine schools of thought in strategic management

	PRESCRIPTIVE SCHOOLS			DESCRIPTIVE SCHOOLS					
	Design	Planning	Positio-ning	Entre-preneurial	Cognitive	Learning	Political	Cultural	Environ-mental
Key author(s)	Andrews, 1965	Ansoff, 1965	Porter, 1980	Schumpeter, 1934	Simon, 1945	Lindblom, 1959 Quinn, 1980	Allison, 1971 Perrow, 1970	Normann, 1977	Hannan & Freeman, 1977
Basic discipline	none	system theory, cybernetics	economics	none	psychology	Psycho-logy	politilogy	anthropology	biology
Key words	SWOT model, "fit"	Forma-lising, program ming, budgeting	analysis, generic strategy	vision, leadership, innovation	bounded rationality, map, survival	Incre-mental, "emer-ging"	power, dominant coalition	ideology, values	reaction, selection, retention
Central actor	Presi-dent-director	planners	analysts	leader	"think"	Every-body who learns	everybody with power	collectivity	stakeholders
Environment	opportu nities and threats	stable and controlled	analysable in economic variables	Manoeuv-rable	Over-whelming for cognition	Deman-ding	intractable malleable	incidental	dominant, deterministic
Strategy	explicite perspec-tive	explicit plan	explicite general position	implicit perspective	mental perspective	implicit patterns	positions, plays	collective perspective	specific position

Source: Elfring – Volberda, 1996: 17.

However, Mintzberg also proved that each school deals with one aspect of the complete picture and ignores the rest. When examining the work, deficiencies, assumptions and context of the various schools in an explicit manner, it becomes evident that strategic management is far from being unified, it is rather fragmented.

3.1.2. Synthecising schools

The scope and purpose of this paper does not allow a presentation of the thinking and differences of all strategic management schools. Instead we wish to give a wider picture of the theoretical approaches, which deal with

company networks, and create a framework for this. The paper uses the work of Elfring and Volberda (1996) for this purpose, who examined the theoretical schools, and found that the greatest disadvantage was their excessive divergence.

To resolve the dissonance among the various scientific fields the authors support a more *synthecising approach*, which is both theory oriented and problem oriented. In their view the fragmentation of strategic management cannot be resolved by opting for one of the schools to the detriment of others, instead a synthesis is called for (*Elfring – Volberda, 1996*). The role of a synthesis is to integrate the three different audiences, i.e. the basic disciplines, the body of knowledge in strategic management and company management, as users. Looking at the technical literature three emerging schools with synthecising features can be identified: the boundary school, the dynamic capabilities school and the configurational school. Table 2 presents the main features of the three synthecising schools.

Table 2

Synthecising schools in strategic management

	The „boundary school"	**A „dynamic capabilities school"**	**The „configurational school"**
Basic disciplines/ theories	- agency theory (economics / psychology) - transaction costs theory - industrial organisation - control theories (sociology) - decision-making theories (psychology)	- resource based theory of the firm - entrepreneurship - innovation theories - learning theories	- social sciences - history - equilibrium models (biology) - disaster theories (mathematics)
Related schools of thought	- positioning school - cognitive school - cultural school - political school	- design school - entrepreneurial school - learning school - environmental school	- political school - environmental school - learning school - cognitive school - entrepreneurial school
Problem solving tools	- the strategy sourcing process - Porter's value chain	- the roots of competitiveness (Prahalad & Hamel, 1990) - the capability matrix (Schoemaker, 1992, 1993)	- archetypes - strategic types (Miles & Snow, 1978) - FAR method (Volberda, 1992, 1993)

Source: Elfring – Volberda, 1996:31.

The boundary school

Among the three synthecising schools the boundary school is the one that covers strategic issues linked to the emergence and operation of company relationship networks and brings together the characteristics that are important when studying this topic. The boundary school studies the boundaries of organisations. The important research questions in the this school are: what are the advantages and drawbacks of producing something in-house or of outsourcing the activity. Second, when is it better to co-operate instead of doing something ourselves or outsourcing. Third, what are the strategic consequences of the "make-buy" or "co-operate" decisions. The analysis of strategic decisions linked to production, outsourcing or co-operation is rooted in different disciplines.

The dynamic capabilities school

The *dynamic capabilities school* regards strategic management as a collective learning process, which aims to develop capabilities that are easily distinguished and difficult to imitate. The most important research topics in this school are:

- How can organisations develop company-specific capabilities?
- What are the determinant factors of successful development routes?
- How can the collective capabilities of a company be determined and measured?

Although originally this approach only considered purely physical resources, today we can see a shift, and thus more attention is being paid to immaterial assets and tacit knowledge. By looking at resource dependence, the dynamic capabilities school also contributes significantly to our knowledge of company networks.

Configurational school

The configurational school is based on socially oriented organisational sciences, with the help of ideal types, in order to explain what causes the variety in strategies and structural configurations. This school builds heavily on descriptive schools, such as the political school, which describes how certain power regimes rise and how dominant coalitions can be eliminated. It builds on the environmental school as well, which shows how it is possible to prepare for various contingencies or what contingencies must be considered, and builds on the learning, congitive and entrepreneurial schools too, which describe – among other things – the transformations between configurations. There were several attempts in technical literature to develop an integrating framework, which would link the knowledge accumulated in strategic management and the contributions of various disciplines. Such frameworks are often based on the principle of complementarity. The theories of some schools relate to circumstances of equilibrium, others are valid in times of confusion and disequilibrium. Some schools focus on the individual, others use the firm as the unit of analysis. However, the principle of complementarity is a rather theoretical solution, since problems in real life often shift from one category to the other. The presented synthecising approach does not offer a problem free solution, but it does attempt to integrate the three target groups of research results and to add to the knowledge base available thereto: the core disciplines, strategic management and company leaders as users.

In the following chapters we will describe the most important and popular theoretical frameworks for examining company networks.

3.2. Social structure theory

Social structure theory emphasises the role of structural factors in promoting relationships. This theory attempts to deduce the appearance of co-operations from the conditions provided by the whole system surrounding companies. Structures are created from the social positions of individuals, groups, organisations and networks, which are different and linked

at the same time. Social structure theory looks at dimensions outside the relationship to predict co-ooperation and co-ordination.

According to this theory classical and neoclassical economics deal with the atomised, undersocialised concept of human activities. In classical and neoclassical economics social relationships between participants were treated as friction hindering the operation of competitive markets – if treated at all. Recently the impact of social structures and social relationships on economic activities have become much more important considerations in economic theories. Social influence is no longer regarded as only an obstacle to competitive markets, but it is still seen as a divergence from rational action. Social influences are regarded as processes where participants acquire habits, behaviours or norms, which they follow quasi-mechanically. Social relationships somehow unerringly determine the behaviours and decisions of the players. In this oversocialised concept social influences are external forces, which condition participants for once and for all, and render irrelevant continuous relationships and structures (Granovetter, 1985).

3.2.1. The embededness approach

Granovetter proved that the striking contrast between under- and oversocialised views hides the fact that both hold that decisions are made and actions are carried out by atomised economic actors: the undersocialised concept relates atomisation to the selfish pursuit of self-interest; from the oversocialised perspective atomisation derives from the fact that behaviour patterns become internalised and therefore continuous social relationships exert only a superficial influence on behaviour. The purpose of applying the “embeddedness” approach of Granovetter is to avoid the social atomisation of economic actors, including the under- and oversocialised assumptions of new economics. Embeddedness suggests that economic activities and their results – as is the case of all social activities and their results – are influenced by the mutual relationship of the actors and the structure of the network of relationships as a whole. In the embeddedness approach social context does not exert a

permanent influence, but it is viewed as a constant process, which is built and rebuilt in the course of interactions. Economic actors neither behave as atomised individuals outside the social context, nor do they follow unchanged habits and norms in a servile manner. Therefore, opportunism cannot be treated as an external factor determining economic behaviour (Granovetter, 1985).

Several researchers have used the concept of social embeddedness in an explicit way, and gave it a wide definition when looking at strategic management issues linked to the behaviour and performance of companies.[5] Social context, which the firm is embedded in, can consist of several elements, which can be grouped into the following wide categories: structural, cognitive, institutional and cultural context (Zukin - Dimaggio, 1990). These can all become important aspects depending on the focus of the study.

3.2.2. Industry as a structural network

Gulati and co-authors (2000) focus on the structural context, which emphasises that economic players are found within social networks. In their view, this approach makes it possible to form a more refined picture about the structure of industrial sectors, since the participants of the given industry are regarded as players embedded into resource and information networks and other processes. Such networks can influence the nature of competition within the industry and the level of profitability, because they go beyond the traditional measure linked to sectoral concentration. Tacit interpenetration or collusion, for example, is much easier to maintain in an industry where main players are connected by a closely-woven web of interfirm relations. In order to illustrate the effects of sectoral analysis from the perspective of networks, Galaskiewicz and Zaheer examined three types of relationship charateristics: (1) network structure, (2) network membership, (3) tie modality (Galaskiewicz – Zaheer, 1999). Network structure refers to the totality of relationship patterns within the given industry. Network membership describes

[5] See Baum and Dutton (1996) for collection of articiles in this topic

how the network is built, what it is like and what elements it consists of, and the identities, status, resources, accessibilities and other characteristics are also examined in order to map relationship lines and nodes within the industry. Tie modality refers to all institutionalised rules and norms, which regulate appropriate behaviour within the network. Sometimes these are formally expressed in contracts, but more often these are tacit norms, which evolve between two companies or in a network.

Tie modalities can also be examined on the level of ties forming the network, for example the strength of the connections, the nature of the relationships, both within the industry and in supplier and customer industries. The strength of ties between companies in the same industry can greatly promote collusion, strong ties can for example increase the probability of an oligopolistic co-operation evolving (Galaskiewicz – Zaheer, 1999). The nature of relationships can in itself be co-operative or ties, which will also determine whether the relationships between the players will be benign or rivalrous (Gulati et al., 1998). These characteristics can be used when studying several industries. The relationships of the focal industry with suppliers and buyers, with supplying and buying industries can be strong or weak, collaborative or competitive, and all this has implications for the profitability of the focal industry. The strong relationships of Japanese car manufacturers with their own suppliers have been proved to contribute to the profitability of that industry (Bensaou, 1997; Dyer, 1996).

It is important to underline that networks potentially have a dark side too, which means that they can force or lock companies into unproductive relationships, or they can prevent them from starting a partnership with other viable companies. Thus the relationship network of the firm can be the source of both advantages and barriers. With competition becoming increasingly fierce in the economic environment, the type of network the firm is connected to gains more and more strategic importance. Gulati states that the selection of allies has similar consequences: today's selection can influence future possibilities. Therefore the past affiliation of both the firm and its network partner influence the firm's actions and strategic behaviour (Gulati et al., 2000).

3.3. Transaction cost theory

We can say that the first theorist of the transaction cost theory was Ronald Coase, who was the first to explain the creation of companies by arising transaction costs in his work titled *The nature of the firm* (Coase, 1937). Transaction costs characteristically include the following: the costs of finding a partner, negotiating and then writing equitable contracts, of monitoring the level of performances stated in the contract, of enforcing the promises made in the contract and of handling non-performance. According to the exponents of this theory if there were no transaction costs then all activities would be carried out through exchanges between units, i.e. via market co-ordination. As markets are rarely perfect in real life, orgaisations exist to solve this problem via hierarchical co-ordination (Williamson, 1975; 1991).

In real life numerous solutions exist between the two extreme possibilities of organising economic activities, the market and the hierarchy, now collectively called “hybrid” solutions (Kieser, 1995). This is a widely used expression that has no precise definition; it refers to organisational solutions where the primary regulators are neither prices nor hierarchies. Hybrid forms integrate the characteristics of the two extremes, and companies apply such solutions when the transaction costs involved in the transaction are “moderately high”, i.e. do not yet require vertical integration.

If we extend this to networks we can say that other forms of co-operation are justified when in-between situations arise, that is when transaction costs are not high enough to neccesitate hierarchical control, but are not so low as to make a market-based exchange possible. A significant limitation of this research tradition was that by definition it treated transactions as separate events. The network approach underlines that each transaction fits into a series of earlier transactions and into a wider relationship network, therefore interpretations linked to transaction costs and contracting must be carefully reviewed (Gulati, 1995a).

Furthermore, the transaction cost approach emphasises that the lowering of transaction costs can lead to efficiency benefits, but according to the network perspective we must also consider what strategic benefits can be reaped by optimising the entire relationship network of the company instead of just one single relationship (Dyer – Singh, 1998). Later researchers started to examine how alliances can serve as important alternatives to even acquisition, sell off or in-house development (Piskorski - Nohria, 1999).

3.3.1. Trust and networks

According to Bareny and Hansen the important impact of the embeddedness of companies in social networks is that it increases *trust* between companies, which decreases the moral threats expected at the beninning. Trust between companies suggests that they put faith in that their partner will not exploit the weak spots of the other (Bareny – Hansen, 1994). Social networks strengthen trust and decrease transaction costs in several ways. First of all, networks make it possible for companies to gather quality or very good information about the other party. Network relations are important sources of referrals, which allow the partnership candidates to identify each other's capabilities and gather information on these. They can also ease due diligence, because both partners have better knowledge of the resources and capabilities of the other and they are more confident that they have properly sized each other up. In brief, networks greatly decrease information assymetry, which would increase contracting costs. Social networks can further decrease transaction costs by making opportunism more costly, as this would have an impact on reputation as well. The cost of *opportunistic* behaviour in such a network is much higher, because the damage to the reputation would not just affect the given alliance where the company behaved opportunistically, but all other current and future alliances. Networks also lower the possibility of opportunism by making it more probable that such behaviour is discovered and that the news will spread quickly within the network. As it takes a long time to build a reputation, but it can be ruimed very quickly, networks are very strong forces deterring opportunistic behaviour (Gulati, 1995).

Trust between companies can greatly help to make co-operations work smoothly, because mutual dependence is strong and co-ordination is needed when performing various tasks. Companies that had previous contacts within the network are probably more aware of the habits, rules and procedures that all must follow. Such social structure, therefore, enables companies to closely co-operate even without extremly costly, formal hierarchical control (Gulati - Singht, 1999).

3.4. Resource-based approach

The resource-based approach focuses on dependence on extenal resources when describing the relationship between a company and the environment. Survival of organisations depends on the ability to acquire and retain resources (Pfeffer és Salancik, 1978). Companies need a group of basic resources to operate. The resource-based approach emphasises that the resources owned or controlled by the firm can provide long-term competitive advantage to the firm if these are inimitable and not easily substituted (Peteraf, 1993). Researchers usually looked for valuable and inimitable resources within firms, but did not examine at first how economic players produce these value-creating resources (Barney, 1991). Scholars studying strategy and the theory of the firm have proved that no organisation can produce all the neccesary resources, therefore they have to buy them from other organisations. Based on this, we can distinguish resources owned or possessed by the firm and acquirable resources.

Some resources are also the key competence of the firm – i.e. expertise or special capability, which provide competitive advantage at a given time in the relevant markets. The *core competencies* theory of Hamel and Prahalad is based on this idea. The authors believe that resources form the basis of competencies, and competencies are the source of competitive advantage. They view companies as sets of core competencies rather than treating them as a

collection of product-market combinations (Prahalad – Hamel, 1990). Co-operations formed in company relationship networks play an important role in the transfer and exchange of competencies, so they are not only an alternative to the market and the hierarchy, but they are also a possible way of acquiring competencies.

A few decades ago it was assumed that companies develop key resources themselves. The idea that we must also look beyong the boundaries of the firm when looking for the sources of value-creating resources and competencies opens a new perspective in the resource-based approach and answers the important question of what is the origin of value-creating resources (McEvily and Zaheer, 1999). In fact, the network of the company can also be look upon as creating an inimitable, non-substitutable value or constraint, as an inimitable resource itself or as a means to access inimitable resources and competencies.

3.4.1. Network resources and social capital

Gulati (1999) compares network resources to the concept of social capital. In his view, from the perspective of the resource-based view the company's relationship network is an important source of inimitable value creating resources. The network of the company allows the company to access key resources in its environment, such as information, capital, goods, services, enabling it to keep or increase its competitive advantage. Such company networks are unique, idiosynchratic and created through a path dependent process, therefore it is diffuclt for competitors to imitate it or substitute them. Furthermore, since the resources gained through them are also idiosynchratic – also created by a combination of completely unique networks – they are also relatively inimitable and non-substitutable. Thus together, the company networks and the resources accessed through them also operate as sources of sustainable competitive advantage. Therefore, in network studies using the resource-based approach network structure appears as a resource that provides competitive advantage to the company.

Naturally, the *structure of the company network* may also lock the company into unfavourable strategic situations (Gulati - Gargiulo, 1999).

Network membership can also become a resource for companies. Researchers base their view on the fact that membership in the network of a company is almost always idiosynchratic. This aspect of the company network is perhaps even more inimitable than the structure, which in theory can be imitated in case of some types of networks. Therefore, the choice of partner companies, as customers, suppliers or allies can limit or increase the range of possibilities, i.e. the opportunity set of future relationships available to the focal company. The network gives no information at all to non-members and new entrants, which can exclude them from new opportunities. Westney (1993) demonstrated that American R&D subsidiaries operating in Japan are often not efficient, because they are locked out of local networks that link Japanese R&D laboratories to suppliers and customers. He suggests that one of the ways to overcome this problem is to enter into a partnership or alliance with a local company rather than trying to manage alone. A partner with the appropriate competencies and rich in resources can potentially become an inimitable source of valuable resources and competencies for the focal company.

In the research results of Anand and Khanna (2000) we can find compelling evidence that experience effects exist in alliances. Companies that enter more alliances can usually gain more value through the alliance over time. They create alliances that money markets regard as creating relatively more value, and they are also able to gain more out of a relationship than their partners. These results suggest that the ability of companies to form alliances improves with time and alliances also yield more as experience grows. From a strategic perspective this means that experience in forming alliances can be a source of strategic advantage. The above are a good illustration of the fact that the relationship network of a company can provide valuable resources and competenices for the company in many ways, and can

determine the differences in profitability between companies, just like other tangible and intangible assets, such as brand name and R&D capabilities.

In the context of resource dependence the main purpose of the company strategy is to ensure the most efficient use of the company's resources and competencies and to create the resource base of the company, i.e. the company forms its strategy based on its resources. According to the resource theory the first step is to find out what resources are needed to reach a targeted market segment. The next issue to examine is whether these resources are at the disposal of the firm. If not, should the firm acquire them internally or externally? The resource-based approach therefore is very helpful in deciding whether to "make or buy" and which type of relationship to choose.

3.5. Knowledge-based approach

Contrary to the theories presented so far, the knowledge-based approach treats the firm as a collection of pieces of information or knowledge, rather than as a legal framework, a collection of contracts or the manifestation of hierarchical co-ordination. By treating knowledge as the most important resource of the firm, it can be viewed as a branch of the resource-based theory (Grant, 1996).

Gulati and co-authors studied the impact of the learning race on the economic return of participants of the strategic network on two analytical levels: on the dyadic level and on the level of the portfolio. All strategic networks can be broken down into a chain of dyadic relationships. In most strategic networks these dyads are neither exclusive nor exclusively co-operative. Partners usually have mixed motivations, i.e. they have private interests and common interests (Gulati et al., 1994). In most cases partners enter into an alliance, because they hope that they can create some kind of joint benefit, which then they can share according to the agreement. However, the knowledge, the information or the access that the partners gain from the alliance may favour

only one of the parties. In fact, sometimes partners may find themselves in a situation where they have to compete with each other in who can learn more from the other and who can exploit the resources of the other more efficiently and then leave the alliance. Such races occur mostly when the private benefit that they can gain after learning all they can from the partner is greater than the common benefit derived from the alliance.

In a provocative article written by Hamel and others (Hamel et al., 1989) it was argued that a lot of alliances between Japanese and US companies ended with a significant competitive disadvantage suffered by the American firm, because the Japanese partners learnt what they could and then cancelled the alliance to exploit the opportunities arising from the newly acquired knowledge alone. Since then it has become an accepted idea expanded on by several researchers that all dyadic relationships should be regarded as a learning race, which will bring more economic returns for the party that has better learning skills or absorption capacity.

While most of the learning race literature focuses on the dyadic level of analysis, Gulati and co-authors (Gulati et al., 1998) suggested that the dynamics of races can be influenced by what portfolio of activities the partners have outside the alliance, or what can be considered their relative scope of activities. For example, if one of the partners is only connected to one relationship network and there is no other business segment where it can exploit what it learns from the co-operation, then it will probably consider the common benefits of maintaining the alliance to be greater than the private benefits of learing fast and terminating the alliance. If, however, the other partner has several allies or business interests where it can use the things learnt in the alliance, then potentially private benefits can exceed the common benefits, which will prompt the partner to bail out and cancel the alliance quickly.

There is not enough consensus regarding the role, operation and conclusions of the knowledge-based approach to call it a theory. Comparing it with the theoretical approaches to company relationship networks we

can state that this developing knowledge-based viewpoint has not yet formed a uniform theory of the firm or of strategic co-operations. Actually it is a combination of the lasting interest in uncertainty and information and the ever renewing thoughts on companies.

3.6. Agency theory

The agency theory tackles problems that come up when one of the parties, the client commissions another party, an agent to perform a job. The problems of agency arise from the information assymetry that develops in this kind of division of tasks, and from the conflicting goals and risk-taking preferences of the two parties. As the agent might have different goals from the client and he knows more about the details of the job, he might have both the motivation and the opportunity to maximize his profit at the expense of the client. To protect itself, the client may decrease the information assymetry by introducing control mechanisms, thus limiting the agent's opportunities to behave opportunistically, or the client may develop incentives for the agent to harmonize the interests of the two parties. The agency theory studies the relative costs of these two solutions. The fundamental works in this field are: Jensen – Meckling 1976; Fama 1980; Fama-Jensen 1983a és 1983b; quoted by Chikán, 1997a: 64.

For academics the agency theory is useful in understanding organisational relationships where management must work under conditions of differing goals and insufficient information. Studies using the agency model focus on company governance, remuneration of managers, acquisitions and generally on circumstances that call forth the self-interest driven behaviour of interdependent players (Eisenhardt, 1989). The theory is valuable because it defines precisely how risk is divided between the contracting parties, how the costs of information and risk-bearing relate to each other, and what the motivations of contractual relationships are, thus it can be used to examine relationships that fall between market exchanges and organisational hierarchy.

Lassar and Kerr focused on how competitive strategies influence interorganisational relationships, and they explained the relationship between producers and independent distributors of consumer audio products with the help of the agency theory. They also used the results of the transaction cost theory to develop their system. Their study is based on the assumption that differences between supplier-distributor relationships can be explained by the differences in the competitive strategies of producers. Therefore, they extended their study of generic strategies to explaining the concrete structure of distribution channels and to the wider and increasingly important topic of interorganisational relationships (Lassar – Kerr, 1996). In their view producer-distributor relationships embody the client-agent model and they fulfill the criteria of usefully applying the agency theory, which require the two parties to be mutually dependent on each other and to co-operate, yet understan dably to have differing or even conflicting goals.

In this context, using the agency model as a theoretical basis offers numerous advantages. First, similarly to the transaction cost theory the agency model is based on relevant assumptions from the perspective of the producer-distributor relationship, such as limited rationality, the probability of opportunism and conflicing goals. The application of the agency theory is justified, because it focuses on the economic motivations, the risks and the driving forces of relationships, regardless of whether the relationship is hierarchically or market regulated. Therefore we can say that the agency model provides an appropriate theoretical supplement when studying interfirm relations. Research results show that strategy selection can serve as the basis for understandig important aspects of supplier-buyer and producer-distributor relationships.

3.7. The limitations of theoretical approaches to networks

It is very tempting to stop at this point and, based on the previous presentation, restrict ourselves to making a catalogue of characteristics, based on which networks are superiour both to totally integrated hierarchies and competitive markets. This of course would lead to the mistification of networks as the new paradigm of business success. Instead, we will briefly summarise the main deficiencies of the network approach.

The social structure theory names flexibility and increasing innovation generating ability as the reason for the emergence of networks. However, it is not clear yet what the role of social embeddedness in networks is when it comes to reacting to big changes. The study especially, but not exclusively of regional networks unmasks the embeddedness dilemma. Grabher (1993a) mentions the example of the regional development of the Ruhr region, which got stuck in the homogeneous regional culture. This homogeneity was reinforced through social processes such as group thinking, and resulted in a general outlook on the world that prevented the information detecting and interpreting race. Heavily embedded regional networks turned away from ties that connected automatically to them. It is clear that this brief reference to the decline of the Ruhr region does not suggest any determinism predicting a similar fate for today's industrial regions, but it does draw attention to the problems related to embeddedness.

Tigilia draws attention to a similar threat facing Italian industrial regions. Cultural identity and local corporate ties may in the long-run also increase inertia and hold back big changes (Tigilia, 1989). In his view, industrial regions are also affected by the erosion of the particular support system of their own social practice and institutions, which ultimately results in lower a level of social embeddedness for them. This second potential threat is the result of the strategy of large co-operations, which try to benefit from the particular strength of industrial regions while decentralising their own internal structure. The traditional exponents of the theory are in favour

of large companies gaining price advantage and flexibility through their own practice using small companies as available subcontractors. In order to profit from the innovative possibilities of such networks large companies must achieve at least a minimal fit with the networks, partially giving up the idea of following their own interests. Organisational compatibility and transparency will decrease transaction costs, but will most probably decrease the embeddedness of industrial regions as well, on which rests their flexibility and innovation abilities. At least, currently we have reason to doubt that industrial regions are able to determine their own fate and conserve the special support system of their social practice and institutions if they should have to fight against large firms (Amin, 1993).

The criticism levelled by the embeddedness theory at transactional theorists is based on the following. In Williamson's transaction cost approach the handling of dual activities appears, which is organised by norms and interests arising from the role of the buyer and seller. This paradoxically sustains atomised decision-making even if seemingly more than one person is involved in making the decisions. The analysed pairs of individuals are considered as independent of the social context: their behaviour becomes separate from the behaviour of the other player and from the history of their own relationships. Instead of eliminating atomisation this viewpoint simply takes it to the level of pairs. (Granovetter, 1985). Furthermore, transaction cost theory is also criticised for not being able to draw the line between various forms of interorganisational relationships, and thus it is also unable to predict when it is advisable to choose form over the other.

According to Grabher (1993) and co-authors the criticism of researchers who regard networks as the origin of social embeddedness is not a standard criticism of Williamson's approach, nor is it a simple repetition of the fact that real life is more complex than the crude duality of markets and hierarchies. This criticism is forcing an open door, as Williamson, just like his spiritual travelling partners, has ascertained that transactions are much more widespread in the medium term than previously thought (Williamson, 1985): "tertium datur"

– the third way does exist. According to Williamson these medium term transactions form a continuum between the extremes of market exchange and hierarchy. Approaching the hierarchy from the direction of the market one finds the outworker system, subcontractor agreements, franchises, joint ventures and decentralised profit centres. The list of the deficiencies of completely integrated hierarchies and competitive markets and the debate over the problem solving capability of these new intermediate forms usually help to explain why these intermediate forms exist. These approaches rely on the assumption that the market and the hierarchy are mutually exclusive factors controlling transactions. Markets and hierarchies can be seen as aritmomorph (unevenly developed) concepts, i.e. distinct sections can be identified and there are no overlaps. Aritmomorph concepts ignore grey spots that are unavoidable in the process of development and change, where concepts also include the elements that are their opposites. No process can be completely divided into aritmomorph parts that are free of change. The ideal types of markets and hierarchies are useful starting points for examining organisations. However, if we insist that these mechanisms mutually exclude each other, our understanding will be blurred rather than crystallised. Different theoretical approaches look at the topic of their study using different assumptions. Thus they contribute to our understanding of company networks with results that reflect different perspectives. They also widen our knowledge of the world with their critical observations about each other. We can say, therefore, that the combined treatment and understanding of the different theories gives us a more complete and multifaceted picture when exploring the widest possible range of aspects of company networks.

4. Strategic concepts of network studies

In this chapter we will present the research findings and theoretical concepts that govern company network studies and the development of company strategy. In order to examine the environmental contexts of networks we will present Porter's already mentioned cluster model, the structure of supplier networks through studies conducted in the car industry, the impact of industry events on the structure of the relationship network in the industry, the correlations of the technology life cycle and the development of partnerships, and the various types of supplier-buyer relationships and the ways of managing portfolios of such relationships.

4.1. Company strategy and company networks

The fundamental strategic goal of the company is achieved by increasing the value of the company building on some kind of competitive advantage. Based on the current activities, the scope of activities must be determined, monitored and changed, if necessary, so that future activities help the value increase of the firm as efficiently as possible (Könczöl, 2002). Porter's general competitive strategies are also based on various competitive advantages. Strategic advantage in this case can be cost leadership or product differentiation or a combination of these. According to another approach, called the profit triangle model, the firm can increase its competitive advantage by finding a novel way of satisfying customer needs or by inceasing internal organisational efficiency (Zakon, 1993, quoted by: J. Bayer and E. Czakó, 1999). As a result of the environmental changes mentioned in the introduction, the focus on core competencies appeared both in the technical literature and in company practice. Thus *organisational efficiency* can be interpreted in interorganisational relationships as well as within companies, and has become an important element of strategy. Company boundaries have become blurred due to partnerships between companies, thus operational

efficiency is also interpreted in a new framework (Prahalad - Hamel, 1993). As we see it, the most important link between strategy and company networks is that they ensure organisational efficiency needed for operation, and a new way of achieving this is the development of a network based on partnerships.

The fundamental question raised by Porter's competition focused strategy approach is what factors determine the market power and thus the profit potential of companies within an industry, and how these factors relate to the strategy chosen by the firm. According to the analytical framework Porter developed to answer these questions, the fundamental factors are as follows: (1) common characteristics of the industry, (2) characteristics of strategic groups, and (3) the position of the company within its strategic group (Porter, 1980/1993:153). As the aim is to find the connection between company relationship networks and company strategy, this logical sequence of three elements can be supplemented by other elements, which are important in this context. As this approach is based on competition between companies, the most important element is the analysis of competitors. In case of company networks, however, the development and operation of a strategy of co-operation is of key importance. Besides the position of the company relative to competitors, the relationships and networks developed with customers, suppliers, companies of related industries and other stakeholders and the position occupied within these also have a significant influence on the strategy. Below we will describe some models developed in this field.

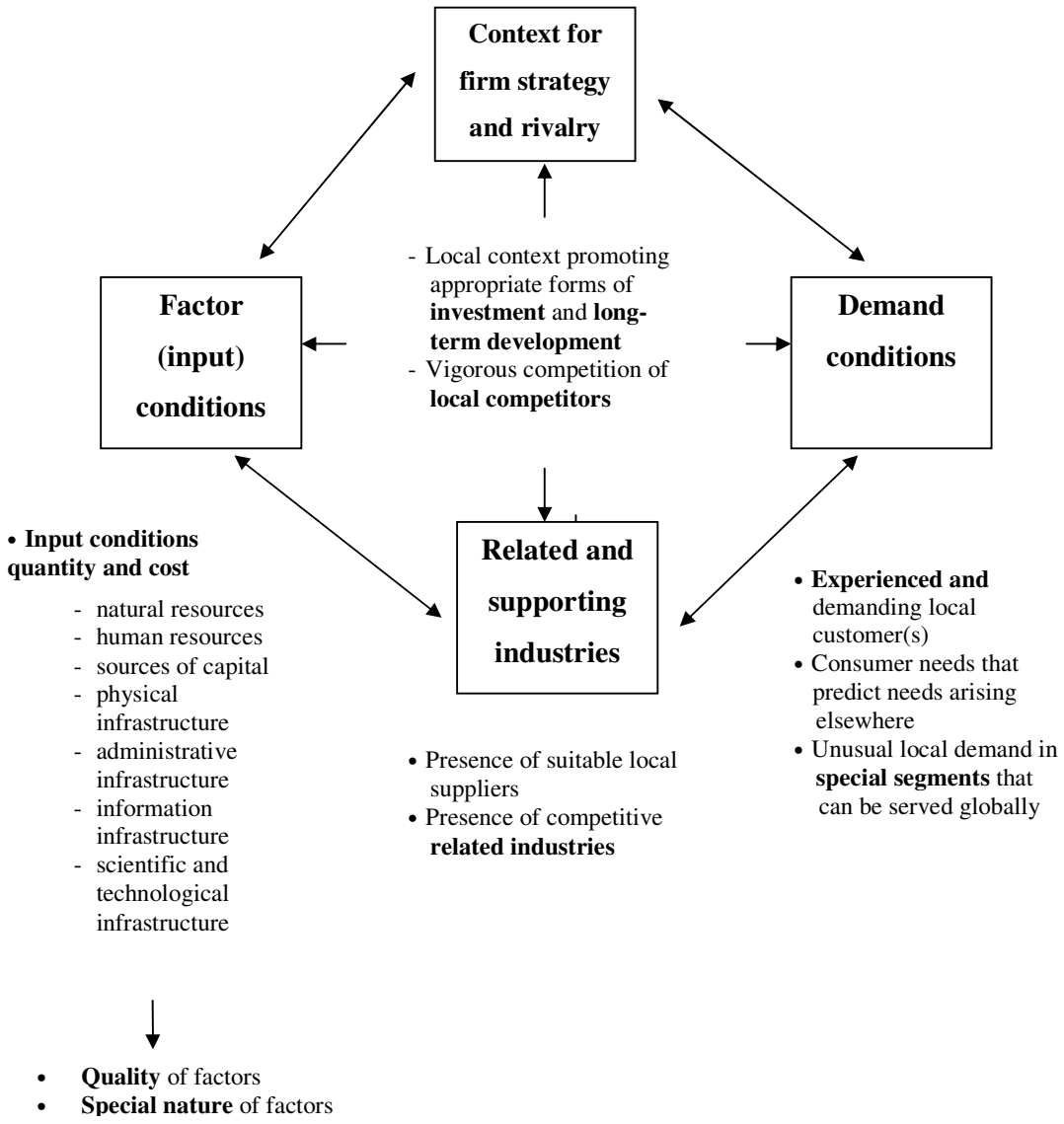
4.2. The cluster model

The cluster model places the operation of the network into a wider environmental context. It can be stated that in general Porter's models summarize conditions that help domestic companies become competitive in their own country. Therefore, the models show domestic factors determining or influencing the competitiveness of companies (Czakó, 2000). In his work titled *The Competitive Advantage of Nations* Porter (1990) modelled the impact of

location on competition with the help of four interacting factors, and he used a diamond shape to illustrate it graphically. Since then, the theory is widely referred to as the diamond model. The model is presented in Figure 2. The cluster model is actually an extention of this concept and is called "sources of locational advantage". The cluster model is closest to the geographically determined network typology, as it relies on the co-operation of local companies and institutions. The nature of the business environment in a geographical area is difficult to define, as the location where the activity is performed influences competitiveness and the increase in competitiveness in numerous ways. The author recommends the use of the model – which is based on studying influencing factors – for establishing company clusters (Porter, 1998a:211). The four factors in the model are: (1) input conditions, (2) context for company strategy and rivalry, (3) demand conditions, and (4) related and supporting industries.

Input conditions include tangible assets (e.g. physical infrastructure), information, legal systems and university laboratories whose work is used by the firm to become more competitive. In order to increase productivity the efficiency and quality of inputs must improve, and they must ultimately specialise on certain clusters. Specialised factors are especially important for innovation and development (e.g. specialised research institute), as in addition to promoting a high level of productivity, they cannot be easily sold or acquired from other sources.

Figure 2
Factors determining locational advantage



Source: Porter, 1998:211

Context for strategy and rivalry refers to the rules, incentives and norms governing the type and intensity of local competition. Ecomonies with low productivity have competition of low intensity: competition, if there is any, is mostly from import products, and local competiton, if there is any, is based on imitation. In such cases price is the only variable affecting competition, and companies aim to cut prices. This type of competition requires minimal investment (Porter, 1998b). More developed economies have stronger competition in several areas; besides price it extends to the minimising of total cost, and the improvement of productive and logistical efficiency. Competition shifts towards the reqirements of high investment and innovative potential, which raises the value of intangible goods, such as knowledge and technology in addition to tangible assets. Clusters play a significant integrating role in these processes. Other factors also play a role: macroecnomic and political stability, as well as microeconomic factors: tax system, company governance systems, etc, and government policy and unchangeable opportunities. These two factors appear separately in the diamond model (Porter, 1990).

Demand conditions are of key importance in promoting the improvement of product quality and related services. Companies with low productivity have to compete with products coming from foreign markets. Progress can only be achieved if local customer needs and the demand improve. It is important, therefore, to examine the nature of domestic demand, with special regard to certain demand segments and their characteristics. Competition in the market greatly contributes to the improvement of the quantity and the quality of demand. The development of domestic demand also promotes the appearance of international firms; and co-operation with them can improve the competitiveness of local companies as well. Clusters of connected companies play a central role in shaping demand factors.

The role of *related and supporting industries* increased with the appearance of more complex products due to technological development. Industries that produce complementary products, use similar inputs, techology and sales channels, or satisfy the same consumers segments belong to this category. Productive assets available to the given industry can be transferred to related industries too, which promotes their development. Successful product and tehnological developments support the manufacturing of other special products and services, and thus the growth of related and supporting industries. A frequently seen phenomenon is that related sectors become geographically concentrated, i.e. form clusters (Porter, 1998b).

4.3. Structure of supplier networks

The vertical division of the activity chain leads companies to rediscover the market of contractual supplier relationships that are at arm's length. Greater trust in market contracts was usually coupled with efforts to decrease costs and to share risks. The best illustration of this are the research results in the car industry, which show that subcontractor relationships in this industry are characterised by a pyramidal structure (Kosaka 1989; Helper, 1993).

Car manufacturers who establish strategic partnerships with various suppliers are at the peak of the pyramid. The first line of the pyramid consists of a small number of suppliers in a favourable position that form a network of companies able to invest heavily into co-research or co-planning activities and deliver pre-assembled parts. These suppliers enjoy stable relationships with their customers based on long-term contracts and exclusive supplier agreements. Following the general logic of networks the response of customers to problems related to first line suppliers is to continue co-operating with the supplier as long as problems can be solved. Such strategy assumes intensive information exchange towards the suppliers. Maintaining this information flow requires a high level of commitment to the relationship from both parties and creates a commitment that greatly motivates innovative

activities (Buckley - Casson 1988). As a 1989 survey of US car industry suppliers indicates, high level of commitment – measured by long-term contracts and trust level of the client – is closely linked to automatisation. However, studies of the car industry, of cutting-edge industries (Kogut et al., 1993), and of the coal, iron and steel industry (Grabher, 1993a) indicate that too much commitment can decrease innovative activity and can force clients and suppliers to take a specific technological route. To avoid being locked in this way and to be able to apply loose ties, big Japanese clients encourage their first line suppliers to diversify in markets that are potentially important for their core activity. These diversified activities function as indicators ensuring the openness of first line supplier networks to new technological possibilities. This kind of co-operation in production within the network of first line suppliers is typically restricted to big and medium-sized companies, with a considerably strong market position and a high level of competence.

Moving away from the peak of the pyramid the market position of suppliers dramatically weakens, technological level declines, company size shrinks and the number of supplier tasks drops (Ikeda, 1988). The bottom of the supplier pyramid consists of small units that are willing to submit to external pressure and accept long-term risks and the possibility of a slump in current company plans. Their passive flexibility greatly differs from the active versatility that is usually the reason for the popularity of small companies (Semlinger, 1993. The passive flexibility of small suppliers comes mainly from the variability of their personnel capacity. A lot of small suppliers use temporary workers and family members who are willing to agree to non-regulated working hours and conditions and to working from home. The relationships between clients and these small suppliers involve increasingly unfavourable market contracts as the distance from the top of the pyramid grows. As a result, suppliers on the lower levels try to dupe each other in a murderous price war. On these highly price sensitive levels of the pyramid the response of the client to problems with the supplier is to find a new supplier. Such cost reduction methods spread in the US car industry in the 1980-s. Contracts were abolished, because the supplier quoted a price that was one-

tenth of a cent higher per item than the price offered by the competitor (Porter, 1983). The pressure to compete with suppliers of underpriced products – who continue to produce until prices exceed marginal costs – prevent other companies from developing their productive assets or their products and from applying long-term planning. This way even these companies find it difficult to secure long-term contracts, to develop a network, which would be of key importance in introducing new technologies and in improving the innovative potential of the whole sector. This realisation lead big clients in the US car industry to decrease uncertainty and opportunism by extending the duration of contracts and by improving the information flow towards lower levels as well. Similarly they are increasing the level of specialisation by outsourcing the entire parts manufacturing process instead of just easily manufactured subparts as they had done in earlier decades. Both choices favour a shift from market exchanges towards network-type relationships between the client and the supplier. The second lesson of this shift in the American car industry is that it is not the most easily accessible solution, but it is more successful in the long run and it is not a free lunch either for clients or for suppliers. Clients must do more than just exchange the relative prices of innovation and other desired supplier activities. Relationships must also be modified – by jointly developing incentive structures, expectations and competencies, and linking companies on the intermediate levels of the supplier network (Helper, 1993).

4.4. Industry events and company networks

After getting to know dyadic relationships strategic management studies recently recognised the significance of multilateral relationships, which bind companies to form a network. The strategic behaviour of companies in an industry depends not only on the partnerships formed by themselves, but on the structure of relationships in the whole network. Network studies used this logic to prove that well structured networks provide the basis for

higher profitability and create valuable social capital. Interfirm relationship networks, therefore, are regarded as strategic resources, which significantly influence strategic performance.

Analyses based on the traditional network approach regarded networks as an unchanging context or system, and did not study changes. Yet current studies fous more and more on the dynamic approach, which examines the reasons for evolution and changes in networks with the passing of time. We will now present the approach, which tries to answer the question of how interfirm relations change within the industry. To do this we will rely mainly on the work of Mandhavan and co-authors (1998). The key assumption is that various industry events cause industry relations to grow stronger, others make them weaker.

The established system of relationships determines how the industry develops and the ability of given companies to affect this development. It is important to emphasise that relationships change and that industry events can cause predictable changes in this system. If company managers are familiar with the impact of various events, they are able to influence changes in relationship systems to favour them. As network structure is a key element of company performance and industry development, companies try to take strategic steps that improve their position within the network. As regards company heads there are two important questions related to the process of change in network structures: first, what changes will occur in the network due to expected industry events; second, how can the company benefit from the changes. The development of the theory of structural changes in networks can be a valuable addition to the literature of strategy.

Before studying changes in network structures, it is advisable to determine, which events do not cause structural changes. Real structural changes only occur when the network relationship system is significantly modified. The network structure remains unchanged, if some players simply enter or exit the market, or if the intensity of network activity simply increases or decreases. It is not regarded as a structural change when some players strengthen

their relationships without initiating new ones with others or when they create new kinds of relationships with existing partners. The process of structural change in networks has been characterised by three factors: (1) the nature of the change, (2) the causes of the change, (3) the direction of the change, based on which two types of events affecting network structure have been identified (Mandhavan et al., 1998).

Table 3

Characteristics of events affecting network structure

Characteristics of industry events	**Structure-reinforcing event**	**Structure-loosening event**
Effect on the bases of competition	Enhances and strengthens existing bases of competition	Radically changes the bases of competitition
Who benefits from the change?	Dominant players with high centrality in current network	Peripheral players with low centrality in current network
Who initiates the change?	Dominant players in current network	Peripheral players in current network

Source: Mandhavan et al, 1998: 444.

Structure-reinforcing events exhibit the following features:

1. They build on currently accepted bases of competition in the industry, and extend those. From a cognitive perspective structure-reinforcing events do not cause fundamental changes in the managerial tools used in the given industry. On the contrary, they strengthen and expand the competitive position of the current management. In practice, several types of structure-reinforcing events exist: e.g. technological developments based on previous procedures, or government decrees abolishing previously existing strategic barriers.

2. Companies that have a powerful position in the network gain more from structure-reinforcing events than more peripheral companies. There are two reasons for this. First, the dominant companies of the industry are likely to be the ones that have powerful network positions. As the event reinforces the

current competitive regime, these companies become even more dominant. Second, these companies have better opportunities to capitalise on the event.

3. The initiation of the event is probably in the hands of currently dominant companies. This assumption is based on the fact that these companies benefit more from structure-reinforcing events than the others. As the central players of the system are in the focus of interactions, they will probably become the sources of developments. Dominant companies are usually more effective in initiating or executing processes directed at abolishing regulatory restrictions (e.g. lobbying).

Structure-loosening events can be described with the following three characteristics:

1. They radically change the basis of competition in the industry. Structure-loosening events induce companies to form new relationships, which provide new resources for the firm. A good example of such an event is when a fundamentally new technology is developed, which radically changes the accepted technological paradigm and renders previously required knowledge or practice obsolete, but it can also be a government measure aimed at breaking monopolies.

2. Companies having a dominant position do not necessarily benefit from these changes. It is just as likely that a relatively marginal firm can attain a more favourable position after the event. Previously powerful companies can be constrained by their previous relationships, obligations in the system, and thus find it more difficult to adapt to the new conditions. However, the gap between dominant companies and more peripheral ones may also grow.

3. The event is probably initiated by currently pheripheral companies. A radically new technology or a fundamentally different pricing strategy will most probably come from a small company operating alone, rather than a company that has a central position. Peripheral companies are motivated by launching structure-loosening events, as they can only win. This is absolutely not true of currently powerful players who might loose their dominant position.

Mandhavan and his fellow researchers (Mandhavan et al., 1998) tested their hypothesis built on these correlations on the international steel market between 1977 and 1993. They selected this network of alliances because significant strategic changes occured in this market in the course of a few decades, the most significant of which were: the regulatory shock in 1984 and the technological revolution in 1987. The key conclusions of their research can be summarised as follows. The differentiation of structure-reinforcing and structure-loosening events is justified. Their effect on the structure of industrial relationships greatly depends on the order and timing of changes. In the case of structure-loosening events the question is for how long the event acts as a decentralising force before starting another centralisation process.
The opportunities for company managers to apply the results come mainly through using the company network as a performance influencing factor, and determining which time periods are suitable for network building.
Information about company networks and the direction of changes in them are important for the government sector when aiming to gauge the potential impacts of new regulations or to eliminate any limiting effects of current regulatory methods.

4.5 The technology life cycle and the forming of partnerships

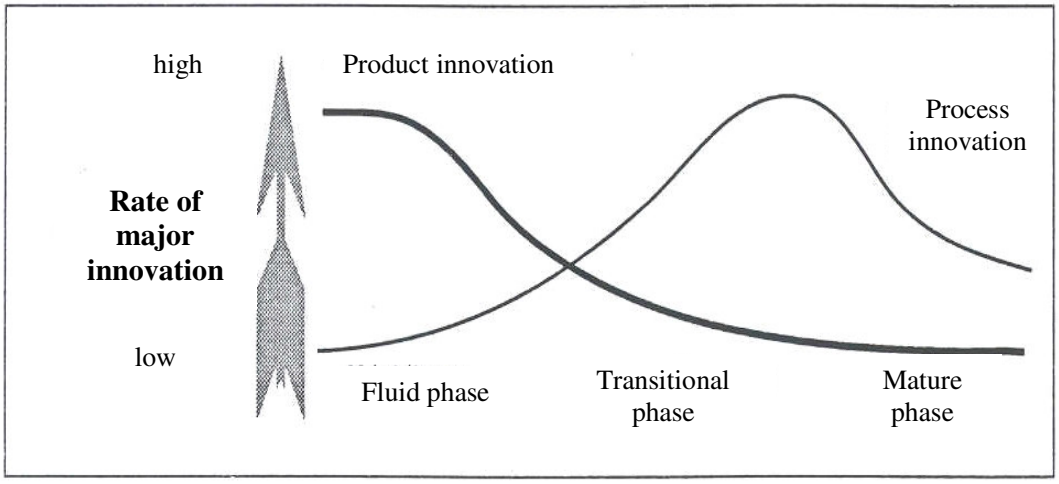
As mentioned before, one of the most important elements of environmental change is technological development. Companies are no longer able to meet the demands posed by technological development alone, so they establish joint activities in the framework of research and development programs to continuously improve their technology. The nature of the partnership chosen within the range of possibilities is therefore a strategic decision for the company. It is much easier for companies to decide if they are familiar with the technology life cycles of their products. For the purpose of the paper, we have selected two relationship types out of the numerous possibilities: alliance and acquisition. We will examine these based on the work of Roberts and Liu (2001). These two relationships were chosen, because both bind the parties together for a long time, but they differ in the amount of responsibility or joint responsibility undertaken and in the amount of shared gains. In case of a long-term alliance, allies keep their strategic independence, and they form relationships with the aim of some joint achievement and they share both the costs and the profit linked to this achievement. In the course of an acquisition, however, a company obtains the ownership rights over another company, the acquiring company completely takes over the activities of the other, and therefore it bears the costs and is entitled to the profit as well. In order to understand the role of allying and acquisition in the context of the technology life cycle we must first clarify the four phases of the technology life cycle. It is especially important for a company to be familiar with the technology life cycle and to know, which phase its product is in, because each phases provides different opportunities for forming partnerships. Therefore, the company management's job is increasingly about matching the technology life cycle of its products with the appropriate partnership types. This can be a complex task, because the various products of the firm can be in different phases, and thus it has to be circumspect about selecting its partners.

There are four phases in the technology life cycle model: (1) fluid, (2) transitional, (3) mature, and (4) discontinuities phase. It was James M. Utterback who first recognised the existence of the technology life cycle, he determined the first three phases in 1970 and later added the fourth, discontinuities phase (Utterback, 1994). The model is illustrated in Figure 3.

The phases are separated based on the nature and frequency of techology-based innovation implemented on the product, and on market dynamics.

Figure 3

The Utterback model of the technology life cycle



Source: Utterback, J. M. (1994), quoted by: Roberts E.B.- based on Liu W. K.,2001: 28.

He differentiates four phases:

(1) the *fluid phase*, when the products representing the given technology are perceived as very risky in the market. In this phase companies do not dare to commit all their R&D capacity to one single technology, because it is uncertain, which technology will emerge as the winner; (2) the *transitional phase* actually starts when the product design reaches a fully developed stage, and it is already clear, which dominant technologies product developments will be based on. Concurrently, product and market risks lessen and from this phase R&D focuses only on improving the design based on the given dominant technology;

(3) the most important characteristic of the *mature phase* is that the main aim is to develop a dominant model based on the established and accepted technology. In this phase the dominant model can be differentiated and developed in several directions. Therefore, the focus in R&D shifts from product innovation to the innovation of production processes;(4) In the *discontinuities phase* the currently dominant technology can become outdated instantly if a more advanced, next-generation technology is introduced. In this phase the market is volatile, but the

new market starts to develop and take demand away from the old market. Earlier entry barriers weaken and the willingness of new companies to enter the market grows. Technological development gradually turns towards the fluid phase of the new technology life cycle, and the process of technological change starts again.

Table 4

Characteristics of the four technology phases

	Fluid phase	Transitional phase	Mature phase	Closing phase
Dynamics of the phase	• Uncertainty in markets and products • High degree of product innovation and process flexibility • Fast growing demand; low total volume • Greater importance of product functionality than brand names • Little direct competition	• Appearance of dominant design • Increased clarity about customer needs • Increased process innovation • Importance of complementary assets • Competition based on quality and availability	• Strong pressure on profit margin • More similarities than differences in final products • Convergence of product and process innovation	• Invasion of new technologies • Growing obsolescence of incumbents' assets • Lower entry barriers; new competition • Convergence of some markets as new technologies emerge
Priorities	• Technology development and preservation (focus on product development and aggressive patenting) • Promotion of proprietary technology as industry standard.	• Realignment of technological capabilities with the dominant design (Continous exploration of technological possibilities) • Continued exploration of technological opportunities • Growth strategy (via aggressive capacity building or establishing a close relationship with suppliers and customers)	• Cost control through the value chain • Strong customer focus • Lean and efficient organisation	• A need for incumbents to identify new technologies and realign core competencies • An option for incumbents to exit the market • Attackers' need to obtain market recognition • Attackers' need to focus on product development
Strategic alliances	• Formation of alliances to promote technology as industry standard • Adoption of licencing strategies (open source licencing or aggressive licencing to users) • Formation of marketing alliances (with the key players of the supply chain or with one industry leader) • Formation of technology alliances often coupled with equity investments	• Winners' aggressive licencing to customers and to companies that lost the dominant-design battle • Formation of joint R&D ventures with companies in the market • Formation of marketing alliances; supply agreements to ensure consistent quality, price and availability	• Formation of joint R&D ventures to share risks and costs of technology development • Formation of marketing alliances to attack latent markets or lure customers away from competitors • Maufacturing alliances to ensure availability of essential products • Open alliances with suppliers and customers	• Attackers' formation of marketing alliances to gain market recognition • Attacker agreements to supply technology leaders • Incumbents' acquisition of the disruptive technology through license agreements
Mergers and acquisitions	• Acquisition of start-ups by companies with well-established technologies from a more high-tech industry • Corporate equity investment by well-established high-tech companies	• Acquisitions of competitors by the winners of the dominant-design battle • Acquisitions by established technology companies entering the market	• Horizontal mergers between companies with complementary products and services • Divestiture of manufacturing capabilities that are not essential • Acquisition of technology start-ups making products that would be difficult to develop in-house	• Possible equity financing for attacker from established technology companies • Established companies move into new markets through acquisitions of niche technology companies • Established companies' acquisition of enterprises that have related product capabilities • Divestiture of companies as priorities shift with market convergence

Source: Roberts E.B., and Liu W. K, 2001: 29.

We can therefore conclude that the decision whether to form an alliance with other companies or to acquire them is an important strategic issue for companies. The answer to this question does not only depend on company-specific competencies and needs, but also on the general evolution of the market, the company's position in the market, and on how pressures change as competitive conditions become tougher. Companies are more willing to enter into alliances as the outlines of the technology become clearer and competition intensifies. In the discontinuities phase, when the outgoing technology lowers the number of players in the industry, the propensity to ally decreases. The number of mergers and acquisitions is often high in the transitional phase, because bigger companies acquire new start-ups in order to extend their technological portfolio. When the dominant model is crystallised and the applied technology matures, the willingness to acquire grows stronger again in companies in order to survive the fierce competition. In summary, we can conclude that the existence of the appropriate partnership at the right moment is of strategic importance to companies, and the preparation of this needs long-term, strategic thinking. A precondition is the monitoring of the technology life cycles of the products and the business lines of the company, as well as the development of the ability to react immediately to technology changes in the market.

4.6. The portfolio of interfirm relations

As regards company strategy, the task is to establish and operate a portfolio of such relationships. We have seen what forms of relationships are produced by the technology life cycles of the company's given products and services and the phases they are in. Companies have different product and service portfolios, and the portfolios or their elements are in different phases of the technology life cycle, so companies must manage several types of relationships at the same time. Strategic principles guide company executives in what relationships to form, and the management of these relationships can become a key determinant of company performance.

As we could see industry events that modify the company network are closely related to technology changes, thus to technology life cycles of company products. The changes accompanying industry events affect the relationship portfolio of the company too. Below we will examine relationship types that can be characterised as customer-supplier co-operations. Here we will not treat relationships between competitors that produce products that satisfy the same or almost the same consumer needs.

The management structure and relationship type the firm should choose in different environmental circumstances is interesting in connection with the creation and management of various interfirm relationships. This is a strategic decision, because it interacts with the decision over the boundaries and core competencies of the firm. The organisational issue linked to this is how to manage appropriately the various types of relationships – and this is about implementing of the strategy. We wish to present a research-based classification in connection with this: Bensaou's (1997 and 1999) theory on "*buyer-supplier relationship portfolios*".

Bensaou studied American and Japanese car manufacturers. He looked for variables that change together in different companies and show a significant relationship with factors that generally characterise strategic partnerships (e.g. trust, mutual dependence etc.) The *level of relationship-specific investments* turned out to be such a variable. This refers to capital investments, which are difficult or expensive to transfer to other relationships or their value drops when transferred to another supplier or buyer.

The two dimensions in the model based on which buyer-supplier relationships can be differentiated are the buyer's specific investments and the supplier's specific inventments. The four relationship types obtained this way are: market exchange, captive buyer, captive supplier and strategic partnership.

Figure 4
Types of buyer-supplier partnerships

Buyer's specific investments	Supplier's specific investments: Low	Supplier's specific investments: High
High	Captive buyer	Strategic partnership
Low	Market exchange	Captive supplier

Source: Bensaou, M. 1999: 36.

As per the basic principle of the contingency theory successfulcompany strategies take environmental factors into consideration. Company relationships must also be formed depending on the environment: (1) the characteristics of the product and the related technology, (2) the competitive environment in the market, and (3) the nature of the supplier market. Table 5 details the differences of the four relationship strategies in terms of these three factors.

Table 5

Environmental characteristics of relationship types

Buyer's specific investments	Supplier's specific investments: Low	Supplier's specific investments: High
High	**Captive buyer** **Product characteristics** • Technically complex • Based on mature, well-understood technology • Little innovation and improvements to the product **Market characteristics** • Stable demand, limited market growth • Concentrated market with few established players • Buyers maintain an internal manufacturing capability **Supplier characteristics** • Large supply houses • Supplier proprietary technology • Few strongly established suppliers • Strong bargaining power • Buyers rely heavily on suppliers, their technology and skills	**Strategic partnership** **Product characteristics** • High level of customisation required • Close to core competencies of buyer • Mutual harmonisation of key processes • Technically complex part or integrated subsystem • Based on new technology • Innovation leaps in product, technology, process • Frequent design changes • Requires strong engineering expertise • Large capital investments required **Market characteristics** • Strong demand and high growth market • Very competitive and concentrated market • Frequent changes in competitors due to unstable or lack of dominant design, • Buyer maintains in-house design and testing capability **Supplier characteristics** • Large multiproduct supply houses • Strong supplier proprietary technology • Active in research / innovation • Strong recognised skills and capabilities in design, engineering and manufacturing
Low	**Market exchange** **Product characteristics** • Highly standardised products • Mature technology • Little innovation and rare design changes • Technically simple products or well structured, complex manufacturing process • Little customisation • Requires little engineering effort and expertise • Small capital capital investments required **Market characteristics** • Stable/declining demand • Strong competition in the market • Many capable suppliers • Same players over time **Supplier characteristics** • No proprietary technology • Low switching costs • Low bargaining power	**Captive supplier** **Product characteristics** • Technically complex products • Based on new technology (developed by suppliers) • Important and frequent innovations and new functionalities in the product category • Significant engineering effort and expertise required • Heavy capital investments required **Market characteristics** • High growth market segment • Fierce competition • Few qualified players • Unstable market with shifts between suppliers **Supplier characteristics** • Strong supplier proprietary technology • Suppliers with strong financial position • Good supplier R&D skills • Weak bargaining power of suppliers • Heavy supplier dependence on buyer

Source: Bensaou, M. 1999: 38.

After determining what relationship type is required by the given environment, the second step is to match it with the appropriate management approach. Bensaou grouped management types according to three dimensions: (a) information-sharing practices, (b) nature of the boundary spanner's job, which we shall call the degree of formality of networking tasks, (c) social climate within the relationship, company processes and culture. See the detailed description in the following table.

Table 6

Managerial characteristics of the various relationship types

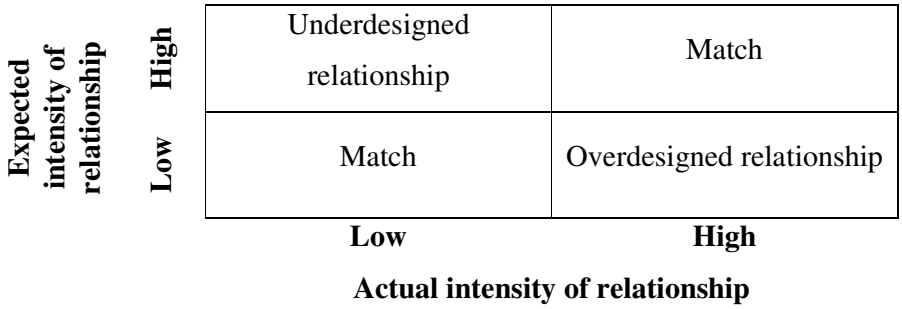
Captive buyer	**Strategic partnership**
Information-sharing practices • Widespread, detailed, continuous and mutual information exchange • Regular and frequent mutual visits **Degree of formality of tasks** • Structured, predictable tasks • A lot of time spent with suppliers **Company processes and culture** • Tense climate, lack of mutual trust • No early supplier involvement in design • Strong effort by buyer toward co-operation • Reputation of suppliers is not necessarily positive	**Information-sharing practices** • Widespread, detailed, continuous and mutual information exchange • Regular mutual visits and practices **Degree of formality of tasks** • Badly defined and badly structured tasks • Non-routine, frequent unexpected events • Large amount of time spent with suppliers to co-ordinate **Company processes and culture** • Mutual trust and commitment • Strong sense of buyer fairness • Early supplier involvement in design • Extensive joint action and co-ooperation • Excellent reputation of supplier
Market exchange	**Captive supplier**
Information-sharing practices • Limited information exchange, especially during contracting • Co-ordination and monitoring of operative processes **Degree of formality of tasks** • Little time spent with supplier • Highly structured and routine tasks with little independence **Company processes and culture** • Positive social climate • No systematic joint effort and co-operation • No early suppliers involvement in design • Supplier fairly treated by the buyer • Supplier has good reputation and track record	**Information-sharing practices** • Little information exchange • Few mutual visits, especially from supplier to buyer **Degree of formality of tasks** • Little time spent with supplier • Complex, co-ordinating tasks **Company processes and culture** • High level of trust • Limited co-operation • Few joint actions • Greater burden put on the supplier

Source: Bensaou, M. 1999: 39.

The designing or redesigning of the relationship portfolio requires the harmonisation of the two previous aspects by the company. This involves three steps: (1) strategic selection of relationship types in accordance with the conditions given by the product, the technology and the market, (2) identification of the right management method for each relationship type, (3) matching of the two based on expected and actual relationship capabilities. The possibilities arising as a result of the third step are shown in Figure 5.

Figure 5

Management of relationship portfolios



Source: Bensaou, M. 1999: 43.

Two types of successful and two types of unsuccessful (under- and overdesigned) relationships exist, depending on what intensity market conditions require from the relationship and how well the company complies with this. In well-operated, successful relationships expectations and actual performance correspond, in case of failed ones they are at variance. If, for example, the firm invests a lot in building trust with frequent visits, while the market and the product would only require impersonal supervision and data exchange, then the relationship is overdesigned. When the opposite occurs, the relationship is underdesigned or underoperated.

We can summarise the strategic management aspects of company relationships as follows. The relationship type has to be determined based on environmental factors, such as product, market and supplier characteristics. Various business lines, products and services are influenced by different environmental factors, therefore companies have a portfolio of relationships made up of different types of relationships with given partners based on the different environmental characteristics. The relationships and the portfolio of these relationships need to be managed appropriately. The three most important fields of co-ordination are information-sharing practices, the degree of formality of the relationship and the building of company processes and relationship cultures. Finally, if the right relationship type is established and it is operated appropriately the failures due to under- or overdesigning the relationship can be avoided. This requires knowledge of what intensity the market expects of the relationship and the actually achieved intensity.

The product and technology life cycles can describe how the basis for the strategy changes over time, thus how an industry develops. The chief difference between the two in terms of strategy is that while usually the dominant influence of the product life cycle is on the strategy of the company that „possesses" the product, the technology life cycle affects the network of companies linked to it and the network strategies of the network members. Greater competitive advantage achieved by increasing internal efficiency and the extention of synergies outside the boundaries of the company are also connected.

5. Hungarian context of company networks and related studies

To understand the Hungarian context of company networks and to determine the focus of the study, it is essential to be familiar with the historical background and to explore the tendencies. The environmental impacts influencing Hungarian companies, the slow, but inevitable development and alignment with the market, the accelerating changing processes of the 80-s and then the 90-s determine the evolutionary direction of Hungarian company networks in several ways.

Changes in the 1980-s

The growing dynamism of the external environment from the 80-s to this day required a loosening of the rigid organisational structure and of the traditional company hierarchy. The apprearance of divisions, semi-independent units and subsidiaries has been due to this tendency, and thus market solutions became increasingly common. However, these reorganisations „did not change the overall economic mechanism and did not perceptibly alter the relationship of companies and economic regulators" (Voszka, 1988:306). Most communist countries were looking for ways to shift from the loosening hierarchy of the command economy to the institutionalisation of the indirect, agreement-based mechanism, that builds on a decentralised organisational structure.

Post-communist era

One of the outstanding steps in the transition was Act VI of 1988, known as the Companies Act, which aimed to accelerate and improve the efficiency of economic processes. The fundamental political changes brought with them the gradual slackening of activity co-ordination and thus the reorganisation of market competition and interfirm relations. The emergence of modern company co-operations was not only due to the radical transformation of

Hungarian company structures, but also to the planning tradition of Hungarian companies and its constant transformation. The gradual integration of market elements into daily company strategy processes and contents also brought with it new forms of co-operation between companies. Communist economies were based on national plans, and this higher level of planning restricted company planning, thus the opportunities to select markets and partners were also limited. According to Mészáros "this mechanism did not allow the development of company independence in the preparation of the plan, in the methods and, among other factors, it also determined the content of plans" (Mészáros, 1987:97). Finally, due to the influence of sectoral ministries the institutional structure was modified, and thus companies gained more freedom in deciding which transactions they wished to perform within the company hierarchy or in the market through other companies. As a result, new company magagement forms, planning systems and strategies started to develop in Hungarian companies.

5.1. Development of networks in Hungary

The review of the historical background sheds light on the environmental impacts, which lead to the appearance and strengthening of new company management strategies and company relationship networks. The world-wide trend of the new millenium reached Hungary as well, thus close ties with other companies are now essential in maintaining competitiveness. The intensification of international competition, on the other hand, lead to the need to form new types of interfirm relationship systems. Below we wish to present the processes that characterised the development of networks in the decades that followed the change of regime. The processes will be presented by summarising the results of the main studies in this field. Studies of interfirm relations in the changing Hungarian economy of the 1990-s can be classified into five main areas of research: ownership-based approach, supplier relationships with multinational companies, intercompany networks, international joint ventures set up with local partners, and strategic

alliances[6]. The most significant research in this field is the Competitiveness researche project headed by Attila Chikán and conducted jointly by the Business Economics Department of the Budapest University of Economic Sciences and Public Administration and the Competitiveness Research Centre, titled *In Global Competition– the microeconomic factors of the international competitiveness of the Hungarian economy* based on surveys performed in 1996 and 1999. The study mapped the evolution of company networks in the framework of its project titled "Competitiveness and interactions among economic players". The other relevant research program carried out in 1999-2000 – which I took part in – was headed by Miklós Szanyi and Ernő Tari and commissioned by the Ministry of Economy by the title *Company networks and strategic alliances in the Hungarian economy. Manifestations of international strategic alliances in Hungary*. This program involved the processing of company case studies as well as a questionnaire-based survey.

5.1.1. Ownership-based approach

One of the possible dimensions worth studying in connection with company networks is ownership ties between companies. According to László Bruszt and David Stark (1996) old-style networks and associations of the previous regime broke down, therefore alliances that closely link companies have assumed a new role in the survival strategies of post-socialist economies. Network relationships formed this way can be regarded as a set of interwoven ownership and personal ties, which include indirect (horizontal) cross-ownership ties of large companies, direct (vertical) ties of subsidiaries and the relationships in the network as a whole. They were the first to introduce the idea that based on these ties the basic unit of analysis of the economic transition in Hungary should be company networks, rather than isolated companies, furthermore that Eastern European countries have company networks that do not fit the bipolar interpretation of market versus

[6] See more details in: Andrási, 1997; Bruszt-Stark, 1996; Buzády-Tari, 1997; Chikán, 1997; Stark,1994, 1997; Szanyi, 1993, 1994, 1997, 2001; Szanyi-Tari, 2000; Tari, 1996, 1998; Török,1996; Tari-Buzády, 1998; Buzády, 2000; Voszka, 1997

hierarchy. They conducted an empirical study of cross-ownership-based company groupings formed through network relationships, which they called recombinant ownership forms (Stark, 1994; Bruszt – Stark, 1996). Players operating within recombinant ownership forms are aware of the mutual dependence of their assets, and do not necessarily respect formal organisational boundaries or the dividing line between private and state property when regrouping these assets. This increases their tactical options and the survival chances of the organisation in under the prevailing uncertain economic circumstances. Stark states that in the course of their business dealings companies form very close formal and informal ties, which considerably stabilise the operating environment and conditions of the companies, and make it possible to represent interests more effectively. Recombinant ownership in Hungary, therefore, is an intercompany network model that can be an alternative both to the market made up of isolated units and to hierarchical organisational forms (Stark, 1997).

5.1.2. Internal networks

One of the main directions of the ever accelerating evolution of networks is internal network development, i.e. the formation and stabilisation of network configurations within companies and company groups. This phenomenon mainly affected the following company forms or undertakings: successor organisations of state companies of the former era and growing undertakings of the private market, which include foreign companies established with capital investments. A brief introduction to this type of networking will now be given based on the research results of Szanyi – Tari (2000).

State enterprises

The networking of large state enterprises manifested itself in the establishment of concerns, starting at the end of the 1980-s. From the two basic models of

concerns the holding concern played the leading role during the spontaneious changes in organisational form.

Summarising the research results we can conclude that with the end of the process of transformation from state enterprises to companies, the organisational base of evolving network concerns is either the unified company or the „parent-company concern". The model is single company – „parent-company concern" – „holding concern". As further divisions occur within the current two-level concerns we can expect to see a growing number of multilevel company groupings, with the growing role of intermediate holding management. Management methods are shifting towards strategic-financial or even purely property management methods. At the same time processes may also turn around, and concern law will develop in accordance with European Union standards. Finally, with the intensification of advocacy activities of the concern lobby, the co-operation of concern type Hungarian companies and network members will grow stronger (Szanyi-Tari, 2000).

Privately owned companies

By the end of the first three years of the 1990-s fundamentally two strategic behaviours developed within dynamically growing private undertakings: (1) focusing expansion, (2) diversifying expansion. Companies and company groups following a focusing strategy usually aimed to use their expertise in a narrower profile and exploit foreign or domestic demand in the given market segment. Graphisoft and Recognita are such undertakings in the IT market, and Pharmavit in the market of generic drugs and effervescent tablets containing vitamins (Szanyi – Tari, 2000; p.29). As regards diversifying companies, they can differ based on the degree of diversification: some company groups ventured less into sectors with significantly different profiles (Műszertechnika Holding), others (Fotex, Novotrade) developed an increasingly wide scope of activities (Pecze, 2001).

From the middle of the nineties the path of private companies and company groups following an intensive growth strategy branched off into two directions. After two-three years of aggressive expansion some companies and groups fell into the „growth trap" (Varga, 1993) and went bankrupt (Kontrax group, Controll group, Mycrosystem Rt.). Other swiftly growing private companies and company groups realised the threats of fast growth in time and successfully restrained their growth rates and consolidated their activities (Fotex Group, Műszertechnika Holding). A third group of companies followed a careful and prudent growth strategy from the start and for many years they covered the costs of expanding the internal network from the company's own sources only (Graphisoft). Furthermore, one important element of success when establishing a new company or acquiring exisiting ones was the harmonisation of the incentive system, the management style, the external appearance and image of activities with the strategic credo, business philosophy and internal values of the company group right from the start (Szanyi – Tari, 2000).

Companies in foreign ownership mainly affected company networks through co-operation agreements signed with domestic suppliers. From the mid-nineties a proportion of medium-sized Hungarian private companies joined the bloodstream of the economy through growing deliveries as suppliers of foreign companies. Earlier studies show that the profitability of supplier relationships is satisfactory, and through these relationships Hungarian companies did not only get a last chance to survive, but their activities were modernised through gaining markets and knowledge transfer. Companies in foreign ownership use international co-operation systems. Strategic alliances are formed especially in research- and knowledge-intensive sectors (e.g. electronic industry, car industry) (Szanyi, 1997).

5.1.3. External networks

Research on external networks focused primarily on strategic alliances and supplier-buyer relationships; therefore I will present these briefly.

Strategic alliances

Studies on strategic alliances in Hungary are linked to the names of Ernő Tari and Zoltán Buzády (1996, 1997, 1998, 2000). In the following section we will summarise their results. The chief conclusions of the 1996 survey of the *Competing in the world...* research program regarding strategic alliances in Hungary were the following (Tari – Buzády, 1998: 24):

- Following the breakdown of previous systems of company relationships, long-term partnerships, strategic co-operations are beginning to reappear in the Hungarian economy. These alliances cannot be compared to strategic co-operations formed among western companies – in terms of their numbers and significance – but they definitely provide a new instrument in implementing the evolving strategies of Hungarian companies.

- In Hungary the pace of development of strategic alliances aimed at improving competitiveness gathered speed in 1994.

- Contrary to practices abroad, the great majority of studied companies agreed on strategic alliances for an indeterminate time period, which can reflect the immaturity of the co-operation concept of the partners or the reservation of the right to exit the alliance at any time.

The results of the 1999 survey showed that state companies no longer constitute the majority of companies participating in strategic co-ooperations and alliances, as they had done in 1996. An evening up of various ownership types can be observed. The loss of influence by state companies was accompanied by an increase in the weight of privatised companies, which lead us to conclude that these companies did not change radically their

relationship system after privatisation. In other words, it is possible that they maintained a significant proportion of their earlier strategic alliances. This supports the survival of and partial restoration of the traditional relationship system.

Supplier-buyer relationships, outsourcing

Hungarian indstrial firms play a significant potential and actual role in the outsourcing practice of European multinational companies. It is important to see how Hungarian experiences so far relate to the general tendencies of outsourcing. The Hungarian economy underwent a huge organisational change after the change of regime.

Hungarian companies often transform various internal service units into independent companies, usually into limited liability companies owned 100% by the mother company. Hungarian managers were prone to use the fashionable outsourcing term to describe this maneuvre as well. Due to the ownership link this procedure cannot be called classical outsourcing, the term “spin off” is a more accurate description in English (Szanyi - Tari, 2000:71). Such spin-offs are regarded as incubators, where the mother company’s long-term commitment to buy under fixed conditions enables the company to survive the initial hardships.

Another marked phenomenon is the activity of foreign investors. One must distinguish the external and the internal networks of multinational companies. Foreign investments made in Hungary and companies acquired through privatisation have become parts of the internal networks of foreign companies. These units have been integrated into the international production networks, which operate as integral parts of the internal management structure of the companies. Other investors, mostly “laggard” investors have already attached themselves to the biggest member of the value chain before as external network participants. With the investment in

Hungary, they extend an already existing co-operation system in a new geographical area (Szanyi – Tari, 2000).

Most Hungarian industrial companies are therefore members of internal networks. External network relationships are more open to small and medium-sized, Hungarian owned enterprises. The result of the research on strategic alliances closely relates to this. The study concluded that from among the different forms of strategic co-operations vertical alliances play a key role in the currently evolving interfirm relationships of companies operating in Hungary. Looking at the long-term purchasing ties and contractual relationships with customers we can say that almost 60% of all strategic alliances observed can be regarded as vertical alliances (Tari – Buzády, 1998).

6. Research methodology

The theoretical framework presented in the first part of the dissertation summarised the widespread possibilities open to researchers when studying company networks. From among strategic management schools, the theoretical approaches of the boundary school come closest to the approach that characterises the present research. One of the key issues examined in the research is *what drives companies to extend the boundaries of the organisation*, i.e. to form relationships with their business partners. When analysing Hungarian company practice in my research my primary aim was to find an answer to this question.

We saw that network partnership has a very wide interpretation in economic literature, therefore it is necessary to define the co-operations that the study applies to. In the present research I examined partnerships that: (1) fix the co-operations of the parties in long-term contracts, (2) are directly linked to the activities of the company, i.e. to manufacturing and selling their products and services.

Based on this, I focused my research on the factors motivating Hungarian firms to form long-term relationships. In the empirical study, from the set of company network relationship types, I focused mostly on the motives of long-term market contracts, as the basic units of networks. More specifically, I examined the motives of long-term supplier and buyer relationships in the Hungarian corporate practice[7]. This decision was based, partly on the objective and the exploratory nature of the research, and partly on the view of the literature that the best way to examine company relationship networks is to look at business relationships. The most important of these relationships are long-term partnerships directly linked to the activity of the company in the supply chain, which partnerships constitute the basic long-term ties of the company's

[7] In the empirical research material, I use the term long-term market relationships to mean long-term contract-based co-operations of suppliers and buyers. I note that although long-term market relationships include ties formed with other partners as well, the analysis of such ties was not an aim of the present research.

relationship network. It is important to become familiar with the factors influencing the motives of relationship-building. Entering into a long-term contract is a strategic decision for a company, thus it is influenced by the environmental context (industry characteristics and the position of the company within the industry, etc.) and the strategy determined based on this context. The strategy depends on the owner of the firm, thus it is probable that companies with different owners will have different relationship management. The fundamental motives of long-term relationships can reveal the (declared or actually represented) values of the companies and the differences in approach. If the motives of relationships and the factors influencing these motives are known, conclusions about relationship networks can also be drawn based on them. Furthermore, the chosen methodology, i.e. the analysis of questionnaire data, also lends the greatest support to the analysis of this issue. The studies were based on the processing of questionnaire data, which gave access to a relatively large circle of companies (approximately 300).

The nature of my research is exploratory and explanatory, it aims (1*) to identify the motives of long-term market relationships of Hungarian companies*, (2) *to analyse the links between company characteristics and the motives of long-term market relationships*, and (3) *to analyse the links between the motives of the relationships and company performance*. The appearance of "*modern co-operative factors*" linked to business ties have assumed particular importance in the examination of all three issues raised in the research. These factors refer to qualitative attributes of partnerships, based on the work of Mohr and Spekman (1994), namely: (1) possibility of common strategy, (2) joint problem solving, and (3) joint development efforts. I emphasise these factors, because they help us answer the question of whether the criteria for common strategy, joint innovations and problem solving with partners are present in the business relationships of Hungarian companies, and to what extent.

The first theme of the research was "*What factors motivate long-term market relationships?*" In this *first part* of the study I analysed the whole sample. The main areas of research were the motives of long-term market contracts and

the changes over time; this was supplemented by an examination of the strategic role of other relationships and the reasons of partnership success.

In the second part of the research I focused on the question of "*What factors influence the motives of long-term market relationships?*" When reviewing international research results, we could see that companies enter into co-operations for different reasons depending on contextual factors (industry characteristics, market positions etc.), company strategy and ownership-structure. By exploring and realising these impacts we can gain a more detailed picture of the situation in Hungary, and by identifying links we can obtain useful information about the motives of business relationships. The *second theme* focused on examining the motives of long-term market relationships of companies *(1) with different dominant owners, (2) in different industry positions, (3) having different strategic objectives, and (4) belonging to different sectors*.

The *third research theme* focused on the question of "*What differences in performance are exhibited by companies with different motives*?" Therefore, in the *third part of the study I compared company groups that are motivated by different factors in their business relationships* to see how different the motives of successful and less successful companies were. The research map in subchapter 6.2.3. illustrates how the three topics are linked.

In the remaining part of this chapter I will present the hypotheses formulated before carrying out the research, the methodological characteristics and the research map.

6.1. Research hypotheses

In this subchapter I will present the initial hypotheses of the research project linked to the examined subtopics.

1. Motives of long-term market relationships of Hungarian companies

According to international experience, in modern network-based economies, co-operation between partners is becoming increasingly important among factors motivating long-term market relationships. Common strategy, joint problem solving and joint development needs have grown in importance in interfirm relations. Based on these experiences, the same tendencies are expected to affect the players of the Hungarian economy.

H.1.1: Co-operation between partners has grown in importance among factors motivating long-term market relationships.

2. The role of factors influencing the motives of long-term market relationships

In the second part of my research I examined the impact of factors influencing motives of business relationships. According to the international literature the implementation of the strategy greatly depends on the correct evaluation of industry position and on the senior management. Leading companies of an industry are in a more favourable situation when forming partnerships, both financially and in terms of bargaining power. Companies that have a satisfactory position and enough capital are not necessarily forced to co-operate, or rather their willingness to co-operate with other players in their industry takes a different form, and they are able to maintain their competitiveness more independently. Smaller and non-leading companies have a much higher propensity to co-operate, such companies either form an alliance with others in a similar power position to be able to act jointly in certain areas of operation, or become suppliers to the large corporations. The owner has a key role in establishing and implementing

the company's strategic approach (Rappaport, 2002), thus in determining which motives of business relationships are to get more emphasis. Based on all this we can assume that companies that are different with respect to industry position, strategic goals, dominant owner and sector of operation will also have different factors motivating their relationships. The above have led me to formulate the following hypotheses in this field with respect to Hungarian companies:

2.1. Dominant owner

H2.1a: Companies having a dominant owner consider the motive related to joint activities with partners to be more important when forming long-term market relationships.

H2.1b: Companies having a dominant foreign owner are more motivated to co-operate with their suppliers in order to stabilise their supplier network, therefore they regard co-operation as more important among the reasons for entering long-term supplier relationships.

2.2. Industry position

H2.2: Companies that regard themselves to be focal players in their industry aggressively exploit opportunities derived from their powerful position in their long-term market relationships.

2.3. Strategic objective

H2.3: Companies following an aggressive growth strategy are more inclined to form long-term market relationships with buyers, therefore they regard the reasons for long-term buyer contracts to be more important.

2.4. Sector of operation

H2.4: When forming long-term market relationships, the impact of the sector of operation is biggest on motives linked to the operations of the company.

The analyses related to this topic examine differences between companies grouped into subsamples based on various aspects. We did not assume a functional relationship between the impact of these factors and the motives of business relationships, as relationship management is also influenced or even fundamentally determined by numerous other factors. The results, however, can be confirmed by regression analysis.

3. The link between the motives of business relationships and company performance

The first two topics focused on the characteristic motives of business relationships in Hungary, and how the effects of various factors appear as motives of business relationships. It is justified to ask whether successful companies are driven by different factors when forming long-term relationships. With regard to one of the important questions of strategic management, i.e. why do companies display different levels of success, we can further specify the question by asking whether companies with better performance are characterised by a stronger desire to co-operate with their partner. In the literature on networks of business relationships it is generally accepted that adequate management of business relationships is a precondition to influencing company performance. The starting point here is the identification of the partnership objectives, which is the focus of my research. The hypothesis linked to this part of the research is:

H3: Companies that regard themselves to be relatively more successful and better performers attach more importance to co-operation with partners as a motive of long-term relationships.

The hypothesis deliberately avoids any assumptions about the direction of the link between performance and motives. The motive of business relationships and the degree of success do not in themselves signal a causal relationship. Expressing the important goals linked to forming business relationships greatly supports the company in formulating its strategy and in making everyday operative decisions, but naturally it is not the only influencing factor. The opposite logical link can also be formulated: companies with different motives perform at different levels of success. It is also conceivable that financially successful companies aim to try different types of relationships, and in their case success is not brought on by meeting the demands of previous business relationships, but financial success made it possible to express different goals in their business relationships.

The research focused mainly on examining the motives of business relationships and the factors influencing them, with the aim of finding possible explanations to the existence (or absence) of such relationships. The exploration and explanation of basic characteristics and links raised numerous other questions, which can be examined in future research projects, mainly through case studies. I will return to the issue of future research options after presenting the conclusions.

6.2 Methodological characteristics of the research

In this subchapter I will briefly present the methodological characteristics of the present research, including the research philosophy, the data and analytical tools used, the sample characteristics, and the questions and methods used for the specific analyses.

6.2.1. Research philosophy, antecedents of the research

The above have already revealed that the research included descriptive, exploratory and explanatory elements too (Babbie, 1996; Hussey – Hussey,

1997). The analysis of the first theme (What factors motivate long-term market relationships?) served to describe the characteristics linked to the business relationships of Hungarian companies. In addition to analysing the sample from several perspectives, I also examined the themes that are supported by empirical results in the international literature. These themes include links between business relationships and industry position, market strategy of the company and the existence of a dominant owner, as well as differences in company performance. The analysis of these issues was explanatory in nature, and aimed at discovering causal relationships.

The research is characterised by a deductive logic and is based on quantitative data analysis. The hypotheses formulated based on theoretical knowledge and previous experiences were examined using the database created during the questionnaire-based survey of the *Competitiveness research*programme (see more details below). I used an inductive approach to distinguish company groups with different performance. The two methods are not mutually exclusive, in fact they are compatible and can mutually complement each other (Babbie, 1996, pp.75-76). Although conclusions or hypotheses formed by induction cannot be tested with the help of the database, they provide a good basis for determining the outline and the focus of a research project using case studies.[8]

The quantitative analysis provides an initial, comprehensive picture that can help explore the characteristics of motives appearing in company practice, declared and actually represented values, the differences in company practice between various company groups, and the changes that have occurred in the near past.

As mentioned before, I used the database of the research programme titled Competitiveness research to examine the hypotheses and to explore further links. The research programme gathered data first in 1996 and then in 1999, and

[8] This research project is underway, in the framework of the OTKA F037789 tender. I am currently participating, together with my colleague, Ágnes Wimmer, in the project titled *The role of business relationships in value creation,* which involves the preparation and analysis of case studies of companies. The project can be regarded as a continuation of earlier quantitative analyses.

a third survey was held in 2004. The 1996 survey was co-ordinated by the Department of Business Economics under the leadership of Attila Chikán. In February 1999 the Competitiveness Research Centre was set up, directed by Erzsébet Czakó, the Head of the Department of Business Economics. Since January 2004 the Director of the Competitiveness Research Centre is Attila Chikán. The 1999 and 2004 survey were conducted by the Competitiveness Research Centre. The questionnaire was filled in by around 300 firms, and comprised almost 100 pages in four sections: the top management, managers working in commercial / marketing departments, production and finance departments filled in questionnaires related to their own field of expertise.

In 1996 and 1999 the projects related to various subsections of the research programme resulted in numerous background studies, quantitative analyses and papers using qualitative methods. Following the 2004 survey the flash report summarising the first results of the survey was prepared in September of the same year with the participation of several researchers (Chikán – Czakó - Zoltayné, ed., 2004). The initial results of the research indicated that the competitiveness of the Hungarian business sector improved since the previous survey. Numerous other issues have come up while examining various areas of company management, which, if made the focus of an analysis, would promise interesting results. Due to my previous experience the database provided a good basis for analysing the operation of companies from several perspectives, and thus for examining business relationships. In the 2004 survey, I took participated in the rewriting of the part on company strategy aimed at top managers in order to include questions on business relationships. These experiences have also helped me in formulating the research questions in the dissertation and in preparing the analyses.

In the next section I will briefly describe the characteristics of the sample, the questions of the database that were used in this research, and the analytical tools applied, thus outlining the course of the research.

6.2.2. Characteristics of the sample[9]

When characterising the sample I am presenting mainly the sample of companies participating in the 2004 survey, making references to divergences from the 1999 sample. The 2004 survey of the Competitiveness research programme altogether 1300 companies were approached, out of which 301 companies finally returned analysable questionnaires. The response rate therefore was 23 percent. From 301 companies the top management section was filled in by 301, the marketing section by 300, the production part by 295 and finally the section relating to financial departments was filled in by 298 companies.

The majority of companies surveyed in 2004 have staff sizes between 50 – 299. Thirty-five percent of companies had between 100-299 staff-members, 28% of companies had 50-99 employees. Companies with over 300 employees made up 32% of the sample, while companies with less than 50 persons represented 5%. The distribution of the 1999 sample in terms of size was almost identical. Compared to the share of size categories published by the Central Statistical Bureau (KSH), medium-sized companies are overrepresented, large enterprises are underrepresented in the 2004 sample.

As regards asset value, almost half (47%) of the companies fall into the category of firms with over 1 billion forint asset value, and 13% of these are over 10 billion forints.

Based on sales revenue most companies (30%) are in the 1-5 billion forint category. In the group of companies generating more than 5 billion forints in sales revenues, the proportion of companies with sales revenues exceeding 10 billion forints is 17%. Forty-six percent of companies generate less than one billion in sales revenues, and 12% of this group make less than 100 million forints. In terms of size, asset value and sales revenue the composition of the 2004 sample was very similar to the 1999 sample, although only 55 elements constituted the actual overlap between the samples.

[9] I used the flash report of the 2004 research programme for characterising the sample (Chikán – Czakó – Zoltay, 2004)

Most examined companies (51.2%) operate in the manufacturing industry – this is also a similarity between the two samples. Service providers make up 12%, commercial firms represent 9.7%, and the remaining companies come from the agricultural, natural resource, construction, energy and miscellaneous service providing sectors. Similarly to the 1999 sample, most respondents in 2004 were from outside the Budapest area. The more developed areas – Budapest, Pest county and North Hungary – are significantly underrepresented. The East Hungary region is significantly overrepresented, while the other regions are evenly overrepresented. Thirty-nine percent of responding companies produce for the Hungarian market, 48% purchase everything from Hungarian sources.

Looking at the ownership structure and the distribution of average ownership share we find that 15% of all assets belong to the state or are in the hands of state companies, 20% of assets are owned by foreign, primarily strategic investors, and more than half of the assets are held by domestic companies. In the group of domestic owners, the average share of internal owners – management and employees – is significant. The data on dominant owners indicates that 61% of respondents have a dominant owner with more than 75% ownership, and the ownership share of the dominant owner exceeds 50% in 18% of cases.

In general the size of the sample provided a good basis for distinguishing categories of companies and for conducting comparative analyses. Although in statistical terms the sample was not representative, it was a useful information source for monitoring the main tendencies and for exploring company practice. The aforementioned differences between the two samples and the changes in the questionnaire require some caution regarding direct time-related comparisons.

6.2.3. Questions and methods used for analysis

In the questionnaire of the Competitivness research, in most cases respondents had to evaluate their activities or express their opinion about a statement on a Likert-scale with five values. A score of 1 or 2 usually indicates a less favourable evaluation or a slump, 3 refers to areas of indifference or no change, while 4 and 5 signal a positive assessment or significant progress. The questionnaire also included alternative questions (e.g. can the company exert an influence over the other players in the industry, does the company have an owner with a 75% or higher ownership share) and some questions asking for specific figures (e.g. staff size). The questionnaires were self-fill in types, but the collectors of the questionnaires were available to give explanations if needed. The self-fill in method raises the problems of interpretation or misinterpretation, which had to be taken into account when performing the analyses. In most cases we asked for opinions and self-evaluation, rather than factual information, which can also lead to some distortions, but these limitations can also be accounted for during the evaluation of the results. The opinions of top managers appear as economic forces, as they make decisions affecting economic processes based on their views. Filling in the extensive questionnaire required a relatively long time, which could have led to some "fast responses". These factors do not affect adversely the analytical possibilities and the validity of the data.

Annex 1 states all the questions of the questionnaire, which were used in the present research. I selected variables using seven questions in the top manager questionnaire and five questions from the commercial and marketing manager questionnaire. The analyses also included the basic information on the given companies.

When investigating the *first research theme* I analysed the whole sample. I used question V8[10] to explore the strategic role of interfirm relations, as in this question respondents were asked to evaluate the importance of various

[10] The letter refers to the type of the questionnaire (V – top management, K – commercial and marketing), the number signals the numeric order of the question.

relationship types in implementing the company strategy. This was supplemented by questions on factors related to the success or failure of relationships (V11, V12). The motives of long-term market relationships were explored with the help of the commercial questionnaire (K18 and K20). This was supplemented by information on the tendencies regarding the proportion of long-term sales and purchasing relationships. The first part of the research mainly involved an analysis of the basic statistical data (including changes over time), which were, in some cases, supplemented by crosstabs, Pair-samples T-test and variance analyses.

To explore the second and third themes I transformed variables characterising the motives of long-term market relationships into factors, which I then used to analyse various groups of companies.

In the *second theme* of the research I analysed the impact of factors influencing the motives of business relationships by breaking the sample into subsamples. In this part I used the subsamples differentiated based on the data obtained from question A12 of the manager questionnaire, which identified differences in the dominant owner (state, foreign, domestic) in the part of the questionnaire asking for basic company data. The second basis for creating subsamples was question V13, which asked about the focal or peripheral[11] industry position of the company. Then I conducted further studies based on question K9 of the commercial questionnaire to explore the differences between the motives of companies with different market strategies (maintain market position, moderate growth, aggressive growth). The fourth grouping was based on sectors, and I examined in detail companies operating in the manufacturing, commercial and service sectors. The differences between the subsamples created in the second part of the research were explored by ANOVA-tables. I also added regression analyses to the examination of factors influencing the motives of long-term market relationships.

[11] The question asked whether the company was a central player in the industry network that is able to exert an influence on other industry players. The international literature uses the term focal firm to describe such companies, therefore I also use this term in the dissertation, alternately with the expression central player. The companies in the other subsample I call relatively peripheral firms, also in the interest of easier understanding based on international usage, but I stress that the question does not lead to such extreme differentiation between the two groups of companies.

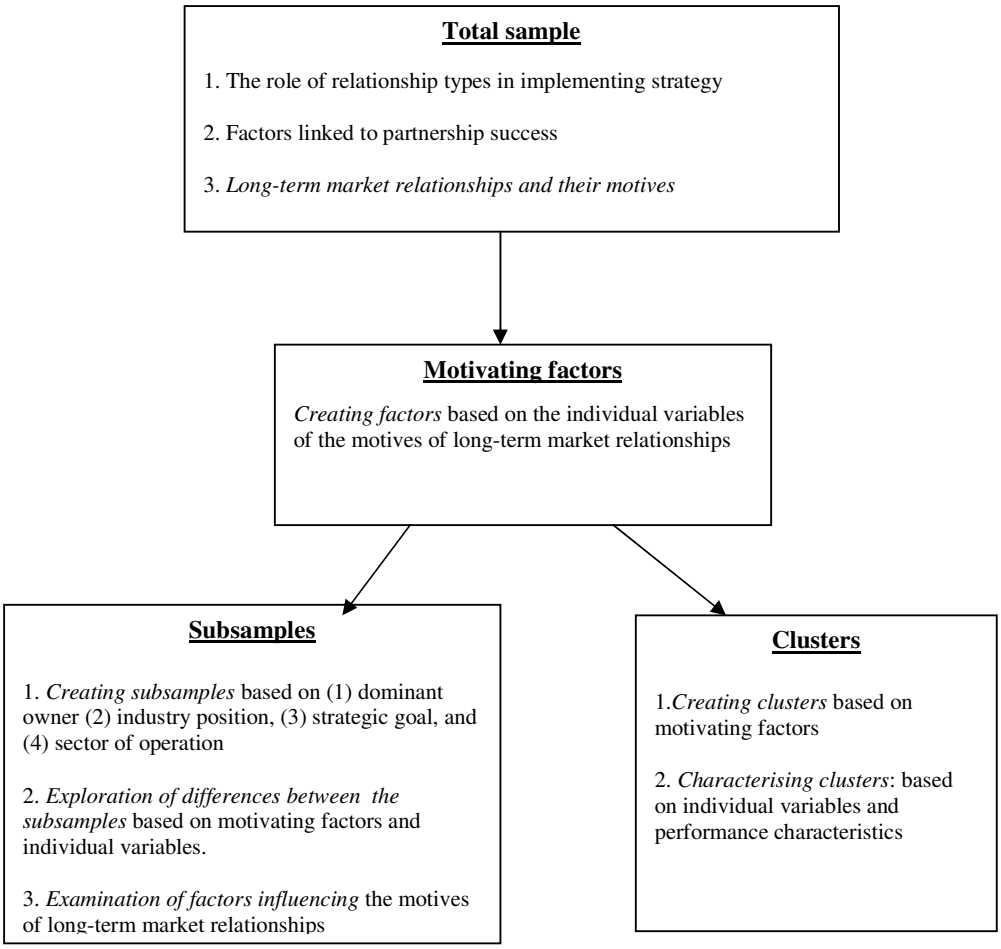
The *third part* of the research focused on exploring the differences between companies having different motives determining their long-term market relationships. Methods using multiple variables were important due to the multidimensional nature of the motives. Thus in the course of the research I used factor analysis as a multivariable statistical method to create the motivating factors of long-term market relationships. I then used a cluster analysis to distinguish groups with different motives. The question (V17) asking about the company's performance compared to the industry average in the top manager questionnaire was the basis for characterising various groups.

The dissertation focuses on the results of the 2004 survey, but I sometimes refer to changes too and compare the results with earlier experiences. I must note that there were only limited possibilities to compare the results with the earlier surveys, as not all questions on business relationships featured in the earlier questionnaires, some were only added in 2004.

Figure 6 summarises the research map. I used the individual variables of the motives of long-term market relationships and factors derived from these to characterise the motives of various company groups. Besides these, I also used variables that provided additional information to the motivating factors of the relationships.

Figure 6

Research map



7. Research results

This chapter summarises the results of the research. I will first give an overview of the results of the earlier studies and the impacts of environmental changes. Then I will present the main findings of the analyses conducted related to the three examined research themes, and finally I will evaluate the pre-formulated hypotheses in subchapter 7.5.

The results of the 1996 Competitiveness researchconfirmed that in the market environment that evolved after the change of regime the relationships previously operated by companies disintegrated. Business organisations broke up, new ownership forms were created and the increasing intensity of competition required the formation of new relationships. A lack of trust was the main characteristic of partnerships in initial phase of evolution of the market economy. Companies used long-term market relationships to a lesser degree and they were only motivated by the need to maintain their operative activities. Examples of co-operation between partners were rare (Chikán, 1997). The activities of foreign investors also had a significant impact on company relationships, as confirmed by the findings of the 1999 survey as well. Foreign companies set up in Hungary and companies acquired in the privatisation process became parts of the networks of foreign companies. The principles and the practice applied when establishing supplier networks in various sectors were in line with those applied in developed market economies. Concurrently, Hungarian-owned companies also reorganised their relationship networks. During the later years of the 1990s the focus of these relationships was the rationalisation of operations. A striking example of this was the wave of outsourcing decisions linked to the focus on key competencies, which entailed saving costs by commissioning others to perform various activities. The prevalence of operative goals linked to relationships was also reinforced by the 1999 survey's finding that significant progress was achieved in measurable dimensions of company operations. The improvement in performance manifested itself primarily in better efficiency, and was less reflected in effectiveness in the market (Czakó et al, 1999). The first results obtained from the 2004 survey

showed that the network aspects of the economy have grown stronger, and company relationships gained new dimensions. The level of distrust, which characterised earlier periods for a long time, decreased. Today the role of interfirm strategic alliances and long-term market relationships is growing, even if this growth is slow (Czakó et al, 2004). The emphasis for the moment is on operative activities, but lately we can also see the spread of co-operation between parties, joint activities, problem solving and development efforts. We can see signs of this in the supplier relationships of companies in foreign ownership. These efforts at closer co-operation would be useful examples for Hungarian companies to follow as well.

7.1 Business relationships of Hungarian companies

This subchapter contains the results of the analyses carried out on the total sample. Here I studied the strategic role of various types of relationships, factors linked to business relationship success, and the motives of long-term market relationships. The chapter presents the results of the examination of the hypothesis linked to the first theme of the research.

7.1.1. The role of business relationships in implementing company strategy

Company experts regard long-term sales relationships to be of primary importance among various relationships comprising the business relationship networks of companies. Sixty-one percent of them indicated that this type of relationship was of key importance. This is followed by long-term supplier relationships, marked as being of key importance by 35% of respondents. By analysing the T-body pairs one can conclude that the opinion on the role of long-term sales relationships and long-term supplier relationships is significantly different (p=0.000), therefore we can say at all possible levels of significance that companies regard long-term customer relationships to be more important than supplier relationships. Table 7 presents the role of various relationship types in implementing company strategy.

Table 7
The role of various relationship types in successfully implementing company strategy, 2004[12]

	N	Mean	"Important" (4) and "Of key importance " (5)	Std. Deviation
Long-term sales relationship	298	4,52	93,9%	0,73
Long-term supplier relationship	298	3,92	67,4%	1,00
Strategic alliances	297	3,33	51,5%	1,20
Ties with local institutions	296	3,30	49,3%	1,12
Ties with state organisations	298	3,28	47,3%	1,20
Single market exchange	296	2,38	14,5%	1,10
Outsourcing agreements	286	2,29	13,9%	1,10
Licensing contracts	293	2,19	10,5%	1,07
Joint ventures	294	2,06	10,9%	1,10

The relationship type that comes third in the order of importance is the strategic alliance, which regarded as important or as being of key importance by 51.1%. Respondents also attached above average importance to ties with local institutions and state organisations. The majority considered single sales transactions, outsourcing and licensing contracts and joint ventures to be unimportant (1) or less important (2) in implementing strategy. All this suggests that ties with state organisations still play a significant role. Large-scale transformations of company organisations have been completed. The establishment of efficient operations, which is one of the pillars of implementing strategy, has been achieved.

This is supported by the fact that neither outsourcing nor integrating efforts play an important role in the strategy of firms anymore.

The results therefore confirm that long-term market relationships play the most important strategic role in the relationship networks of companies. In this category the importance of long-term sales relationships is much more stressed, which suggests a stronger customer focus. These results confirm that by analysing the motives of long-term customer and supplier relationships important segments of company relationship networks are examined.

[12] This question was not included in the 1999 survey, so it is not possible to analyse changes.

7.1.2. The success criteria of business relationships

The majority of companies (50.5%) were 70-90% successful in their business relationships in the past three years, 31% considered the proportion of their successful relationships to be between 50-70%. Unsuccessful relationships make up 10-30% of all relationships in 66.4% of companies. All these suggest that the business relationships of companies have stabilised, and most operate successfully. In order to be able to characterise network relationships it is important to know what companies think about the factors influencing the success or failure of their co-operations. I will now present to factors linked to business relationship success or failure to map this issue. The results are presented in Tables 8 and 9.

Table 8

Factors linked to business relationship success, 2004[13]

	N	Mean	"Important" (4) and "Of key importance" (5)	Std. Deviation
Trust	298	4,14	80,2%	0,82
Quality of communication	298	3,96	74,8%	0,82
Relationship fitted with own strategic goals	297	3,92	71,3%	0,93
Joint problem solving	298	3,88	69,1%	0,96
Co-ordination	298	3,85	69,4%	0,89
Information sharing	296	3,84	67,2%	0,89
Commitment	295	3,77	63,3%	0,96
Mutual dependence	296	3,11	32,7%	0,97

Trust features as the first factor influencing business relationship success; it was deemed to be of key importance in relationship success by 37.2% of companies. This is followed by the quality of communication and then by a fit with the company's own strategic goals. The latter was marked as an important factor of success by 42.4% and as a key factor by 28.9%. Factors characterising co-operation between partners, such as joint problem solving, co-ordination and information sharing were given very similar assessments, and almost 70% of companies marked these factors as being important or of key importance in

[7-8] The question was not included in the 1999 survey, so it is not possible to analyse changes.

achieving business relationship success. We can see that companies attribute smaller significance to mutual dependence that the other factors.

We can therefore conclude that trust continues to be of primary importance in relationship success. The results indicate that progress has been achieved in how well partnerships fit strategically. Companies characteristically view a fit with their own strategic goals to be important, which, observing theoretical considerations, can be regarded as dominant in the operation of relationships. This is a favourable change, as earlier experiences showed that relationships were not linked to the strategic goals by the partners (Könczöl, 2002).

Table 9

Factors linked to business relationship failure, 2004[14]

	N	Mean	"Significant" (4) and "Of key significance " (5)	Std. Deviation
Lack of commitment by partner	286	3,26	45,4%	1,16
Lack of joint problem solving	285	3,21	43,5%	1,16
Inadequate information sharing	286	3,14	39,8%	1,12
Lack of trust	284	2,87	30,2%	1,13
Overdependence	283	2,80	29,6%	1,27
Relationship did not fit with strategic goal	286	2,79	30,0%	1,19
Lack of commitment	286	2,49	16,7%	1,07

The mean values were higher when assessing success criteria, but the std. Deviation was bigger in the case of factors linked to failure. The distribution analysis performed based on the T-test shows that company managers judged success criteria more boldly, while they were more uncertain when it came to assessing the reasons for failure.

According to company managers the lack of their own commitment was the least characteristic reason for relationship failure, it was more characteristic of the partners. The results suggest that companies consider a fit with their own strategic goals to be an important success criterion, and a lack of such a fit causes

failure in only 30% of cases. Joint activities while operating business relationships appear in both assessments. Joint problem solving and information sharing are such activities, which cannot be linked to the partner's or the company's own activities only. Both activities are given more emphasis among the factors of failure than in the ranking of success criteria. All this suggests that companies can feel the deficiencies in co-operation when operating their business relationships. Lack of trust assumes less importance as a reason for failure, while in earlier surveys company relationships were generally characterised by a lack of trust[15]. The fact that the lack of trust is not of key importance among the reasons for relationship failure, and only 6.3% of companies regard it as such, is to be seen as a favourable change.

7.1.3. Long-term market relationships

The studies of long-term market relationships refer to analyses of customer and supplier relationships. In questions K16-17 of the commercial questionnaire respondents gave the ratio of their long-term sales and purchasing relationships (see Annex 2). In 56.5% of cases the ratio of long-term sales relationships is between 0-40%. In other companies these represent a higher ratio, with 20.1% of companies using long-term contracts 81-100% of the time. The std. Deviations of long-term supplier relationships is very similar. 57.7% of companies order less than 40% of their purchases via long-term supplier contracts. Comparisons with the 1999 survey and the crosstabs show similar std. Deviations. Comparing the two surveys, the biggest shift is seen in the categories falling between 61 and 100 percent, where the proportion of those using long-term contracts in more than 80% of cases increased. In the case of purchasing relationships companies that use long-term contracts in 61-80% of cases comprise the majority. The analysis of the cross-tables confirmed that companies use long-term relationships similarly both when selling and when buying. In both cases, the distribution is overrepresented towards the two extremes. Thus companies that consider the ratio of their long-term sales contracts to be between 0-20% and 21-40% use long-term contracts in the same

[15] Chikán-Czakó-Demeter (1996); Czakó-Wimmer- Zoltay (1999).

proportion when it comes to supplier relationships. 70.0% of companies that use long-term sales relationships in 81-100% of cases apply long-term supplier relationships to the same degree. In summary, according to the results of the two surveys the ratio of long-term market relationships did not change significantly, a slight shift can be observed towards more use of such relationships. This reinforces the fact that the important basic ties of relationship networks in the Hungarian economy are long-term market relationships. Relationships have stabilised, the ratio of companies operating long-term market relationships is significant, and these relationships play a key role in the implementation of company strategy. Those who apply these relationships with success sign more long-term contracts than before.

7.1.3.1. Long-term customer relationships

Below I will present the research results linked to the motivating variables of long-term relationships with customers and suppliers. The question is *why do companies establish long-term market relationships?* Tables 10 and 11 present the reasons for long-term contracts in their order of importance, starting with the most important reason. Comparing the results of the two surveys we can conclude the most important motives of long-term customer contracts are still the traditional operative factors. In first place we find stable utilisation of capacity and stable gross sales revenue. Yet despite their key importance, the ratio of companies decreased since 1999. This is true of the other factors too; the ratio of companies that considered knowledge of expected order volume to be of key importance decreased the most.

Table 10

Motives of long-term customer relationships, 1999

	N	Mean	"Important" (4) and "Of key importance " (5)	Std. Deviation
Stable utilisation of capacity	240	4,14	80,4%	0,97
Stable gross sales revenue	241	4,08	79,3%	0,97
Prior knowledge of expected order volume	238	3,82	71,9%	1,05
Hope of future contracts	236	3,56	59,4%	1,10
Prior knowledge of expected quality requirements	233	3,51	56,6%	1,15
Hope of plannable contracts	233	3,49	52,8%	1,05
Cost reduction possibilities	236	3,44	53,4%	1,12
Flexibility within the framework of the contract	232	3,16	41,8%	1,15
Exclusion of competitors	233	2,97	42,1%	1,30
Joint development possibilities	232	2,95	34,9%	1,22
More favourable transport, storage conditions	232	2,93	39,7%	1,27
Possibility of joint problem solving	233	2,86	31,8%	1,19
Possibility of common strategy	233	2,82	31,4%	1,25
The buyer insists on it	235	2,77	26,4%	1,14

Table 11

Motives of long-term customer relationships, 2004

	N	Mean	„Important” (4) and „Of key importance” (5)	Std. Deviation
Stable capacity utilisation	260	3,86	73,8%	1,27
Stable gross sales revenue	260	3,73	69,2%	1,29
Prior knowledge of expected order volume	259	3,40	53,3%	1,24
Hope of future contracts	260	3,38	55,0%	1,20
Hope of plannable contracts	260	3,27	48,8%	1,21
Cost reduction possibilities	260	3,21	47,7%	1,30
Prior knowledge of expected quality requirements	256	3,17	43,0%	1,21
Exclusion of competitors	259	2,97	38,7%	1,36
Flexibility within the framework of the contract	255	2,93	34,5%	1,16
More favourable transport, storage conditions	257	2,80	33,8%	1,30
Joint development possibilities	258	2,74	32,5%	1,26
Possibility of common strategy	259	2,71	31,6%	1,26
The buyer insists on it	261	2,71	29,1%	1,28
Possibility of joint problem solving	258	2,70	28,6%	1,22

Most companies still consider factors that do not concern volume, costs and sales revenue to be of average importance or less important, and compared to the previous survey the proportion of companies that consider these factors to be truly important decreased. In the case of "modern co-operation factors" linked to business relationships (Mohr-Speckman, 1994) no change occurred since the previous survey. The importance assigned to factors that are given more emphasis in the research, such as development opportunities, common strategy and joint problem solving is still below average. The importance of co-operation in development activities dropped by 0.2% and is considered to be important or of key importance by only 32.5% of respondents when formulating long-term customer contracts. A common strategy is also less important than in 1999, although the ratio of those who deem it important did not change. The possibility of joint problem solving is considered to be important by a mere 30% of respondents in the case of long-term contracts concluded with customers, while this ratio is almost 70% in case of factors linked to relationship success. In summary, companies are still driven by traditional motives linked to operative functioning when entering long-term customer relationships, though primacy of these motives decreased somewhat, which suggests that companies give more consideration to other factors. In conclusion, the hypothesis stating that co-operation has grown in importance among factors motivating long-term business relationships could not be confirmed in the case of customer relationships.

7.1.3.2. Long-term supplier relationships

The assessment of the motives of long-term supplier contracts is presented in Tables 12 and 13 in order of decreasing importance. Comparing the results of the two surveys we can conclude that the order of importance attached to reasons for long-term supplier contracts did not change since 1999. Reliable supply and the possibility of predicting purchasing costs continue to be the most important considerations, and the ratio of companies that deem this to be of key importance grew.

Table 12

Motives of long-term supplier relationships, 1999

	N	Mean	"Important" (4) and "Of key importance" (5)	Std. Deviation
Reliable supply	243	4,20	81,8%	1,00
Possibility of predicting purchasing	240	4,05	78,7%	1,08
Reliable, known quality	237	3,95	74,7%	0,92
Plannable contractual conditions	236	3,92	76,7%	0,89
Cost reduction possibilities	235	3,77	68,5%	1,09
Flexible ordering within the framework of the contract	232	3,40	54,3%	1,17
More favourable transport, storage conditions	225	3,25	51,1%	1,19
Gaining advantage over competitors	224	3,15	44,2%	1,20
The desire to keep the supplier	232	3,05	35,8%	1,13
Known supplier	219	2,99	35,6%	1,14
Possibility of common strategy	233	2,88	34,8%	1,22
Joint development possibilities	232	2,80	26,7%	1,18
Supplier insists on it	228	2,55	20,2%	1,19

Table 13

Motives of long-term supplier relationships, 2004

	N	Mean	"Important" (4) and "Of key importance" (5)	Std. Deviation
Reliable supply	263	4,16	84,3%	1,01
Possibility of predicting purchasing costs	263	3,90	84,2%	1,15
Reliable, known quality	261	3,81	69,7%	1,07
Plannable contractual conditions	261	3,73	70,5%	1,08
Cost reduction possibilities	260	3,62	62,7%	1,23
Flexible ordering within the framework of the contract	259	3,26	49,0%	1,28
More favourable transport, storage conditions	258	3,14	48,1%	1,31
Gaining advantage over competitors	259	2,98	40,9%	1,34
The desire to keep the supplier	258	2,84	31,0%	1,22
Possibilities of joint development	257	2,74	31,5%	1,25
Known supplier	255	2,73	27,5%	1,21
Possibility of common strategy	259	2,68	30,5%	1,23
Supplier insists on it	258	2,40	13,6%	1,10

The significance of cost saving decreased. As regards response ratios, the greatest drop was observed in the ratio of companies that considered "known supplier" to be important or of key importance. However, the ratio of those who believe in joint development possibilities grew compared to the previous survey.

Comparing the two surveys we also find that mean scores decreased in the assessment of the motives of both customer and supplier contracts, and concurrently the distribution of scores also increased. In statistical terms this might suggest that company managers are more uncertain about the motives in 2004 than in 1999. From an economic perspective, however, it reflects the growing diversification of motives of long-term market relationships. Companies weighted various motives differently. This is verified by the shift over time in the ratio of companies deeming various motives to be important or of key importance. As regards co-operation related motives it is worth noting that there was a growth in the ratio of companies that regard joint development possibilities to be of key importance in supplier relationships.

In conclusion, we can state that motives linked to maintaining operations continue to be more important for companies when forming long-term customer and supplier relationships. Based on the sample we can conclude that motives related to joint development activities and joint problem solving have appeared in business relationships in Hungary, but these motives are still only taking shape, rather than spreading. However, based on these results, the hypothesis regarding the growth in importance of co-operation cannot be confirmed.

7.2. Motivating factors of long-term market relationships

To analyse the groups of companies that are the object of further studies I created factors via factor analysis from the individual variables linked to the motives of long-term market relationships. The aim was to find the characteristic types of motives linked to buyer and supplier relationships. I only analysed variables which had a correlation value over 0.5 with the given factor. In this way, I created six factors out of 21 variables. I named factors based on the constituting variables to reflect their content. Therefore, the factors include the variables that most clearly correlate with the content of the given factor. The results of the factor analysis are presented in Annex 3. The factors related to the motives of long-term market relationships are the following:

1. The elements of the **"Operative motives of customer contracts"** factor:
- stable gross sales revenue
- stable utilisation of capacity
- predictable contracts
- hope of future contracts
- knowledge of expected quantity
- cost reduction possibilities

We can see that these variables are linked to ensuring the operation of companies. The results of the factor analysis confirmed that the motives of long-term interfirm relationships include some characteristically intertwined elements. Knowledge of what stable gross sales revenue to expect is required to make it possible to estimate the resources needed for the core activities of the company. Companies want stable utilisation of capacities and to know the expected quantity in order to ensure continuous operations. According to the responses of top managers these variables are closely linked, therefore one single factor can be formed from them. It must be noted that the cost reduction and the future contracts variables are motives that are linked to the co-operation and market-related factors too. However, they exhibit the closest correlation with operative conditions, thus they were integrated into this factor.

2. **"Co-operation motives of customer contracts"** factor includes the following variables:

- - joint development activities
- -joint problem solving
- - common strategy
- - flexibility within the framework of the contract.

This factor includes the co-operation aspects of long-term buyer relationships. From the perspective of the research, the results of the factor analysis confirmed that "modern co-operation factors" (based on Mohr-Speckman, 1994) exert a unified motivational force when long-term market relationships are formed. Therefore top managers support the notion that the motives related to joint problem solving, common strategy and joint development activities go hand-in-hand. Among the motives of long-term purchasing contracts these variables emphasise the possibilities of joint activities by the partners. In partnerships they relate to achieving common objectives and to results that can be achieved through joint activities. All this supports that companies treat these variables together. If they are motivated to take part in joint activities, this aim can manifest itself in joint problem solving, common strategy or joint development activities too.

3. **"Market-related motives of customer contracts"** factor includes the following variables:

- customer insists on contract
- exclusion of competitors

The content of the factor reflects the motives originating from the market environment of the company. The two variables refer to the impact of the partner or market competition on the motives of the company's long-term buyer relationships. The factor, therefore, furnishes information on the bargaining power of the company versus its buyers and its position of power compared to competitors. These two variables also shed light on the market position of the company and on to what degree its relationship building is influenced by other players on the market.

In the case of rotated factor weights, the first factor explains 29.0%, the second factor explains 25.5%, and third factor is responsible for 12.4% of the variance. Thus the three factors together explain 67 percent of the total variance.

Similarly to the buyer side, the variables linked to the motives of long-term supplier relationships also produced three factors, which are the following:

4. **"Operative motives of supplier contracts**" factor integrates four variables:
- predictable purchasing costs
- reliable supply
- plannable contracts
- cost reduction possibilities

5. **"Co-operation motives of supplier contracts"** factor is made up of:
- joint development activities
- common strategy
- flexibility within the framework of the contract.

6. **"Market-related motives of supplier contracts"** factor includes the following variables:
- the desire to keep the supplier
- known supplier

Motives related to the supplier side further confirm that the long-term market relationships of companies are motivated by three types of factor groups. These comprise factors linked to company operations, market characteristics and co-operation with the partner. The motivating factors of long-term supplier contracts are very similar in meaning to the contracting motives of buyers with the same name. The three factors together explain 72.8% of the total variance, with the first, second, third factors responsible for 29.2%, 24.4% and 19.1% respectively.

7.3 Results of the analyses of various subsamples

Following the creation of subsamples, in this subchapter I will first present the analyses of the hypotheses linked to the second theme of the research. I first used the factors to analyse the subsamples of companies presented below, then I applied the individual variables to explore the details of deviations.[16] The subchapters of this chapter contain the results of the different subsamples, then a regression analysis on the various subsamples is presented to summarise the subchapter.

I examined the motives of business relationships in the environment – strategy – performance context of the contingency theory. This is the underlying reason for forming subsamples and the justification for their examination. The process of formulating the strategy is based on getting to know environmental features. This relates to familiarity with the company's market position, competitive position, and bargaining power versus customers and suppliers (Porter, 1980). Based on this I deemed it important to compare companies with different industry positions. At the same time, industry features are also important environmental factors. Companies operating in different sectors have different product market combinations, which result in fundamental differences in their activities. Mechanisms differ in manufacturing firms and service providers. Maintaining operations is more significant for manufacturing companies, while flexible exploitation of new market opportunities is more characteristic of service providers and commercial firms.
Ownership structure has by definition a fundamental impact on strategy, as the decisions, which are most significant for long-term competitiveness, are either taken by the owners or are under their control. Company relationships are affected by the weight of various types of economic players among the owners: the state, foreigners, citizens and companies of the given country. The creation of subsamples is also justified by the changes that occurred in the ownership structure of companies in Hungary (privatisation, presence of foreign investors etc.) Based on all this we are justified in assuming that when long-term market

[16] When evaluating the results I considered deviations upto level p=0,1 to be significant.

contracts are concluded different motives are attached to the various strategies formed in accordance with the previously presented environmental factors.

7.3.1. Subsamples of companies with different types of dominant owner

In line with the strategic approach of the dissertation I defined dominant owners as owners with 75% or larger ownership share, who thus have full powers to determine company strategy. The subsamples formed in this way are the following: (1) dominant state ownership, (2) dominant foreign ownership, (3) dominant domestic ownership, (4) companies with no dominant owner with more than 75% share.

Thirty-eight percent of companies in the sample could not be classified in the analysed subsamples, as these companies gave a vague or no answer to this question.
In the group of companies involved in the analysis, 16.7% or 31 companies were dominantly state-owned. Dominant foreign ownership characterised 43 companies, representing 23.1%. The biggest subsample includes 90 companies with dominant domestic ownership, standing for 48.4%. The ratio of companies with no dominant owner is 11.8% with 22 companies.

7.3.1.1. Comparison of subsamples created based on the type of dominant owner

This subchapter summarises the most characteristic differences between the four subsamples created based on the type of dominant owner. Then the main characteristics of the subsamples are described based on the significant deviations found between the given subsample and the other companies.

The subsamples show significant deviation in three out of the six motivating factors that were identified. These are: (1) co-operation motives of customer contracts (p=0.040), (2) co-operation motives in supplier contracts (p=0.081), (3) market-related motives of supplier contracts (p=0.066).

The mean values for factors indicate that co-operation motives are stronger in the case of a dominant foreign owner both on the buyer side and on the supplier side. The market-related motives of supplier contracts on the other hand are most significant in the case of long-term contracts concluded by state-owned companies and firms with a dominant domestic owner. All this points to the conclusion that the networking activity of companies with a dominant foreign owner is more conscious, and is motivated by achieving some common long-term benefit through co-operating. The motives related to taking advantage of market opportunities, excluding competitors and exploiting the company's power position, however, are stronger in companies dominantly owned by the state or a domestic owner. This latter case reflects a tactical attitude to networking rather than a conscious partnership approach.

The results obtained through the factors therefore support the statement that the difference in the type of dominant owner influences co-operation motives the most. When studying the characteristics of the subsamples. I examined the individual variables too, in addition to the factors. The significant deviations thus obtained are summarised in Table 14, the ANOVA tables are in Annex 4.

Table 14

Significant deviations of subsamples created based on the dominant owner

	Owner	N	Mean	Std. Deviation	Sig.
Factor called co-operation motives in buyer contracts	Min 75% state ownership	26	0,13	1,075	0,040
	Min. 75% foreign ownership	34	0,254	0,796	
	Min. 75% domestic ownership	80	0,034	0,993	
	No owner with min. 75% share	15	-0,595	0,923	
Factor called co-operation motives in supplier contracts	Min 75% state ownership	28	-0,002	1,021	0,081
	Min. 75% foreign ownership	35	0,390	0,950	
	Min. 75% domestic ownership	79	-0,007	1,047	
	No owner with min. 75% share	18	-0,356	1,149	
Factor called market-related motives of supplier contracts	Min 75% state ownership	28	0,335	0,931	0,066
	Min. 75% foreign ownership	35	-0,231	0,961	
	Min. 75% domestic ownership	79	0,192	0,999	
	No owner with min. 75% share	18	-0,120	0,909	
Ties with local institutions are important in implementing strategy	Min 75% state ownership	30	3,83	0,87	0,047
	Min. 75% foreign ownership	42	3,21	1,14	
	Min. 75% domestic ownership	89	3,2	1,13	
	No owner with min. 75% share	22	3,41	1,14	
Ties with state organisations are important in implementing strategy	Min 75% state ownership	31	4,19	1,17	0,000
	Min. 75% foreign ownership	42	3,1	1,27	
	Min. 75% domestic ownership	89	3,21	1,08	
	No owner with min. 75% share	22	3,23	1,11	
What percentage of all purchases is based on long-term contracts?	Min 75% state ownership	30	2,57	1,38	0,045
	Min. 75% foreign ownership	37	3,32	1,63	
	Min. 75% domestic ownership	86	2,49	1,51	
	No owner with min. 75% share	20	2,85	1,6	

The strategic role of ties with state organisations is significantly different (p=0.000) in the relationship network of different companies. They are essential for companies with dominant state ownership, and are least important to companies in foreign hands. Furthermore, the ratios between long-term purchasing contracts and total purchases are significantly different (p=0.045). This type of relationship was used most extensively by companies with a dominant foreign owner, while the majority of firms with a dominant domestic owner use these contracts to a lesser degree.

7.3.1.2. The subsample of dominantly state-owned companies

Companies dominantly owned by the state consider long-term sales relationships to be most important in implementing company strategy (4.52), and attach significantly more importance to ties with state organisations (p=0.000) and local institutions (0.007) than other companies. Significant deviations are presented in Table 15 and the ANOVA tables are in the Annex.

Table 15

Significant deviations of dominantly state-owned companies

	Min. 75% state ownership				
		N	Mean	Std. Deviation	Sig.
Ties with local institutions are important in implementing strategy	no	153	3,24	1,13	0,007
	yes	30	3,83	0,87	
Ties with state organisations are important in implementing strategy	no	153	3,18	1,13	0,000
	yes	31	4,19	1,17	
The desire to keep the supplier motivates us to sign a long-term contract	no	136	2,88	1,21	0,045
	yes	30	3,37	1,16	
We do not sign long-term contracts with suppliers to be more able to bargain from a position of power	no	123	2,50	1,16	0,010
	yes	30	3,10	1,03	

They consider stable gross sales revenue (4.04) to be the most important motive of long-term market-related relationships. Furthermore, among the variables of the factor called market-related motives of supplier contracts, the deviation of the variables related to signing agreements to keep the supplier (p=0.045) and to not signing an agreement if this gives them better chances to assert their bargaining power (p=0.010) is significant in this subsample. They attach below average importance to joint problem solving, common strategy and joint development possibilities when deciding to form long-term relationships.

7.3.1.3. The subsample of companies with a dominant foreign owner

Companies with a dominant foreign owner show significant differences in the factor of co-operation motives of supplier contracts (p=0,026) and in the marker-related motives factor (p=0,029). Based on the mean of factor values, co-operations with suppliers (joint development activities, common strategy) gain more emphasis in the long-term contracts of companies in foreign ownership. It is important to note that they are also more motivated to co-operate with customers, but the deviation is not significant (p=0,147). Regarding their market-related motives, they are less motivated by their the desire to keep the supplier or prior knowledge of the supplier. Factors and variables producing significant deviations are presented in Table 16, and the ANOVA tables are featured in the Annex.

Table 16

Significant deviations of companies dominantly in foreign ownership

	Min. 75% foreign ownership				
		N	Mean	Std. Deviation	Sig.
Factor called co-operation motives of supplier contracts	no	121	-0,022	1,019	0,026
	yes	34	0,254	0,796	
Factor called market-related motives of supplier contracts	no	125	0,176	0,974	0,029
	yes	35	-0,231	0,961	
What percentage of all purchases is dome through long-term contracts?	no	136	2,56	1,49	0,007
	yes	37	3,32	1,63	
The relationship was successful, because it fitted with our own objectives	no	141	3,76	0,98	0,005
	yes	42	4,21	0,68	
The relationship was unsuccessful, because it did not fit with our strategic objectives	no	135	2,74	1,21	0,053
	yes	41	3,15	1,01	

Based on the mean values we can say that the role of various relationship types in implementing the strategy is more balanced in the case of companies dominantly in foreign ownership. The role of various co-operation types is not as different as in other subsamples. Companies in foreign ownership deem a fit with the company's own objectives to be the most important among the success factors of business relationships. In this respect they significantly differ

from other companies (p=0.005). It is important to note that this factor is more emphasised as a reason for failure as well as success, although statistically the deviation is not significant (p=0.053). This type of consistency suggests that the view of foreign companies is more advanced in linking strategic objectives and successful business relationships. They see more clearly that the success of the relationship is doubtful if the objectives of the relationship are not linked somehow to the strategy of the company. They know and realise more their own mistakes in failed relationships, while other companies are much more prone to blame the partner for the failure of the relationship. Contrary to other subsamples, companies dominantly in foreign ownership believe that the lack of a fit with the company's own objectives is a more important reason for failure than the lack of commitment by the partner (3.08). They use long-term supplier relationships to a significantly higher proportion (p=0.007).

7.3.1.4. The subsample of companies with a dominant domestic owner

Companies with a dominant domestic owner do not significantly differ from other companies with regard to motivating factors. Among the motives for market relationships the strongest are the operative motives linked to the buyer side (p=0.144), but the deviation is not significant here either. The companies in this subsample significantly differ (p=0.048) in that they do fewer purchases through long-term supplier contracts.

7.3.1.5. The subsample of companies with no dominant owner

The factors related to co-operation motives of companies with no dominant owner significantly differ from other companies both on the buyer side (p=0.008) and on the supplier side (p=0.087). The mean values of factors show that the expected value of variables linked to joint development activities, join problem solving and common strategy is significantly smaller, i.e. are less motivational for companies with no dominant owner. This reinforces again that the motives of co-operation are mostly determined by the dominant

owner. Significant results are presented in Table 17, and the ANOVA tables are in the Annex.

Table 17

Significant deviations of companies with no dominant owner

	No owner with min. 75% share				
		N	Mean	Std. Deviation	Sig.
Factor called co-operation motives of customer contracts	no	140	0,107	0,963	0,008
	yes	15	-0,595	0,923	
Factor called co-operation motives of supplier contracts	no	142	0,092	1,026	0,087
	yes	18	-0,356	1,149	
The hope of future contracts motivates us to sign long-term contracts with customers	no	145	3,59	1,10	0,034
	yes	18	3,00	1,24	
Flexibility within the contracted framework motivates us to sign long-term contracts with our customers	no	143	3,13	1,07	0,003
	yes	18	2,33	1,08	

The mean value of relationship motives is usually lower. This is also true of considerations that show significant deviations. Among the individual variables of factors, future contracts (p=0.034) and flexibility within the framework of the contract (p=0.003) are relatively less motivational for them when entering into long-term contracts.

In summary, the examination of the subsamples created based on the type of dominant ownership resulted in the following conclusions. The subsamples differ in how long-term market relationships are used, how they are viewed and with respect to the motives. Companies that have a dominant owner are more motivated to co-operate with their partners, thus the strategic fit with the motives of long-term market relationships is more conscious.

Companies with a dominant foreign owner have a more balanced view of relationships. Besides buyer relationships, supplier relationships are also regarded as important. Co-operation motives become more emphatic among motives of long-term market relationships (joint problem solving, joint development activities, common strategy) than in the case of state-owned or domestic companies. Therefore Hungarian companies in foreign ownership display the tendencies that can be seen in the practice of companies

abroad, where partnerships are now interpreted differently. These companies are more consistent in forming their relationships, their approach is more advanced in linking strategic goals and the success of business relationships, and they focus more on making use of co-operation opportunities with partners. All this indicates that the values held by the foreign owner also manifest themselves in the management of business relationships, in the interest of implementing the strategy. They possess an approach that is used in more developed market economies which means that customer service built on a stable and co-operative supplier base is a very strong motive when they are forming long-term market relationships. State-owned and domestic companies should follow this example by paying more attention to their supplier relationships, in addition to their strong customer orientation, and by implementing the observed co-operative approach.

7.3.2. The subsamples created based on industry position

The two company subsamples created based on industry position are focal companies and relatively peripheral companies (see footnote 11). Altogether 36.8% of companies in the sample consider themselves to be focal players of their industry able to exert an influence on other players in the sector, and 63.2% are relatively peripheral, i.e. they do not play a central leading role. This break-down is supported by the fact that 85.3% of focal companies agree that their company is able to influence the development of the industry. The two subsamples display a significant difference in this respect (p=0.000).

7.3.2.1. Differences between focal and relatively peripheral companies

The two subsamples do not differ significantly with respect to the motivating factors created via factor analysis, so I analysed the variables used to characterise the complete sample as well.

Both subsamples consider long-term customer and supplier relationships to be of key importance in implementing company strategy. A significant difference appears in the value of sales relationships (p=0.027), as they play a more

important role in implementing the strategy of focal companies. Focal companies attach more importance to strategic alliances (p=0.001), ties with state organisations (p=0.000) and ties with local institutions (p=0.032). Licensing contracts (p=0.022), outsourcing agreements (p=0.001) and joint ventures (p=0.008) play a much smaller role in the relationship management of relatively peripheral companies. All this indicates that industry leaders form business relationships with a wider range of partners in their industry and regard these as more important in implementing the company strategy. Table 18 features the significant deviations between the subsamples, and the ANOVA tables are in Annex 5.

Table 18

Significant differences between focal and relatively peripheral companies

	Is the company able to exert an influence on other players of the supply chain?				
		N	Mean	Std. Deviation	Sig.
Long-term sales relationship	no	185	4,45	0,82	0,027
	yes	109	4,64	0,52	
Licensing contracts	no	185	2,08	1,03	0,022
	yes	105	2,38	1,13	
Strategic alliances	no	185	3,14	1,29	0,001
	yes	109	3,63	0,94	
Establishing a joint venture	no	185	1,92	1,05	0,008
	yes	106	2,27	1,15	
Outsourcing agreements	no	178	2,11	1,07	0,001
	yes	105	2,57	1,11	
Ties with local institutions	no	185	3,19	1,14	0,032
	yes	108	3,48	1,08	
Ties with state organisations	no	185	3,06	1,20	0,000
	yes	109	3,64	1,13	
What % of company sales are based on long-term contracts?	no	180	2,35	1,54	0,039
	yes	108	2,75	1,67	
What % of all purchases is based on long-term contracts?	no	175	2,23	1,42	0,000
	yes	102	2,89	1,53	
The exclusion of competitors motivates us to sign long-term contracts with customers	no	157	2,79	1,37	0,011
	yes	98	3,23	1,33	
We do not sign long-term contracts with customers because we want to use our position of power	no	153	1,89	1,01	0,004
	yes	91	2,31	1,23	
We do not sign long-term contracts with suppliers to be more able to bargain from a position of power	no	149	2,28	1,18	0,004
	yes	91	2,71	1,09	

The two subsamples produced significant differences regarding long-term contracts. Based on the cross-reference tables (see Annex) we can conclude that the focal players of the industry use long-term contracts to a larger degree both in sales and in purchases than relatively more peripheral firms, while a bigger proportion (almost 50%) of relatively peripheral companies use long-term contracts in less than 20% of cases. Looking at the mean values of the variables motivating long-term contracts we can conclude that focal players attach more importance to the various motives, but the order of importance is the same in both groups. Similarly to the complete sample traditional motives, such as volume, sales revenue, costs are of primary importance, while co-operative considerations, joint strategy, development and problem solving are relegated to the background. The significant deviations between the two subsamples are related to the power position of focal companies. They regard the exclusion of competitors to be much more important in signing long-term contracts with their customers ($p=0.011$), and refrain from signing long-term contracts with customers or suppliers if they can thus use their position of power (significance in both cases is $p=0.004$). This supports my previously formed hypothesis.

7.3.3. Company subsamples created based on differing strategic objectives

Three subsamples emerged when the sample was broken down according to strategic objectives: (1) maintain market position, (2) moderate growth, and (3) aggressive growth. Eighty-six companies, i.e. 30% of the sample belong to the group that wishes to maintain its market position. Companies with moderate growth objectives make up the biggest subsample with 184 companies, representing 63%. The subsample with smallest number of companies in it was the group aiming at aggressive growth, comprising 22 firms and representing 7% of the sample. Three percent of respondents did not give an assessable response.

Similarly to previous subchapters I will first analyse the significant deviations of the three subsamples, then during the individual analysis of the subsamples I will present deviations from other companies.

7.3.3.1. Comparison of the three subsamples created based on strategic objectives

I did not find significant deviations between the motivating factors of the subsamples, thus I applied the individual variables to explore differences. On one hand, the deviations summarise the attributes of the subsamples, and on the other hand they also draw attention to the main differences between the subsamples. These are presented in Table 19 and the ANOVA tables are in the Annex.

Table 19

Significant deviations between the subsamples created based on strategic objectives

	Strategic objective of the firm				
		N	Mean	Std. Deviation	Sig.
What % of all purchases is based on long-term contracts?	maintain market position	85	2,62	1,46	0,005
	moderate growth	171	2,31	1,47	
	aggressive growth	21	3,38	1,53	
Joint development possibilities motivate us to sign long-term contracts with customers	maintain market position	74	2,77	1,19	0,054
	moderate growth	161	2,65	1,29	
	aggressive growth	19	3,37	0,90	
The possibility of forming a common strategy motivates us to sign long-term contracts with customers	maintain market position	75	2,73	1,24	0,027
	moderate growth	161	2,61	1,26	
	aggressive growth	19	3,42	0,96	
The exclusion of competitors motivates us to sign long-term contracts with customers	maintain market position	76	3,25	1,28	0,053
	moderate growth	160	2,83	1,40	
	aggressive growth	19	3,26	1,19	
Cost reduction motivates us to sign long-term contracts with suppliers	maintain market position	76	3,92	1,08	0,027
	moderate growth	158	3,49	1,27	
	aggressive growth	22	3,36	1,22	

In all three groups long-term customer relationships play a more important role in implementing the strategy, but these relationships are most used by companies with aggressive growth strategies. Long-term supplier relationships are also more used by companies that aim towards aggressive growth. It is worth noting that companies with moderate growth strategies use long-term supplier contracts to the smallest extent. In aggressive growth companies some co-operative motives (common strategy, joint development activities) are more emphasised than in the other subsamples, where these motives are not important considerations. The motive of excluding competitors is characteristic

of both aggressive growth companies and those aiming to maintain their market position. Cost reduction possibilities via supplier relationships are most important for companies wishing to maintain their position.

7.3.3.2. The subsample of companies aiming to maintain their market position

Companies aiming to maintain their market position attach significantly less importance to long-term customer relationships (p=0.012) andsupplier relationships (p=0.044) than other companies. Among the motives of long-term customer relationships the most important ones are stable utilisation of capacity (4.07) and stable gross sales revenue (3.87). They significantly differ from companies with different strategies in that they sign long-term contracts with customers to exclude competitors (p=0.038). In the case of customer contracts they attach more importance to transport and storage conditions (p=0.040) and plannable contracts (0.024). Supplier contracts are significantly more motivated by cost reduction (0.027) than in the other subsamples. Both in case of customer and supplier relationships the motives of joint development, joint problem solving and common strategy are treated with below average importance. Factors displaying significant deviations are featured in Table 20, and the ANOVA tables are in the Annex.

Table 20

Significant deviations of companies aiming to maintain their market position

	Strategy aimed at maintaining market position				
		N	Mean	Std. Deviation	Sig.
Long-term supplier relationships are important in implementing the strategy	no	205	4,01	0,98	0,044
	yes	85	3,76	1,04	
Long-term customer relationships are important in implementing the strategy	no	204	4,59	0,69	0,012
	yes	86	4,35	0,81	
The exclusion of competitors motivates us to sign long-term contracts with customers	no	179	2,86	1,39	0,038
	yes	77	3,25	1,27	
Transport and storage conditions motivate us to sign long-term contracts with customers	no	180	2,70	1,27	0,040
	yes	74	3,07	1,33	
The hope of plannable contracts motivates us to sign long-term contracts with customers	no	181	3,18	1,20	0,024
	yes	76	3,53	1,19	
Cost reduction motivates us to sign long-term contracts with suppliers	no	180	3,48	1,26	0,027
	yes	77	3,94	1,08	

7.3.3.3. The subsample of companies following a moderate growth strategy

In companies following moderate growth strategies the share of long-term supplier contracts (p=0.011) within all purchases is significantly lower. Long-term sales contracts also represent a smaller proportion than in the other subsamples (p=0.113). The factors with significantly deviating values are summarised in Table 21, and the ANOVA tables are in the Annex.

Table 21

Significant deviations linked to companies following moderate growth strategies

	Strategy aimed at moderate growth				
		N	Mean	Std. Deviation	Sig.
What % of all purchases is based on long-term contracts?	no	107	2,78	1,49	0,011
	yes	171	2,31	1,47	
The exclusion of competitors motivates us to sign long-term contracts with customers	no	96	3,23	1,27	0,022
	yes	160	2,83	1,40	
Transport and storage conditions motivate us to sign long-term contracts with customers	no	93	3,02	1,29	0,045
	yes	161	2,68	1,29	
The desire to keep the supplier motivates us to sign a long-term contract	no	97	3,06	1,25	0,028
	yes	158	2,72	1,19	
Cost reduction motivates us to sign long-term contracts with suppliers	no	99	3,81	1,13	0,045
	yes	158	3,49	1,27	

They are less likely to be motivated by excluding competitors (p=0.022) or by more favourable transport, storage conditions (p=0.045) in their contracts with customers. Contrary to companies aiming to maintain their market position, they are less motivated by cost reduction possibilities (p=0.045).

7.3.3.4. The subsample of companies following an aggressive growth strategy

The factor related to co-operation with customers has a significantly different value in companies following an aggressive growth strategy (0.093) than in other companies. The mean values of the factors show that motivating factors linked to co-operation with customers were generally rated higher than in companies with different strategies. It is important to underline that two out of

the four variables constituting the factor (joint development activities, common strategy) significantly deviate in themselves. Table 22 presents the significant deviations, and the ANOVA tables are in the Annex.

Table 22

Significant deviations linked to companies following an aggressive growth strategy

	Strategy aimed at aggressive growth				
		N	Mean	Std. Deviation	Sig.
Factor called co-operation motives of customer contracts	no	227	-0,027	1,01	0,093
	yes	18	0,384	0,81	
What % of all purchases is based on long-term contracts?	no	257	2,42	1,47	0,004
	yes	21	3,38	1,53	
Joint development possibilities motivate us to sign long-term contracts with customers	no	236	2,69	1,26	0,023
	yes	19	3,37	0,9	
The possibility of forming a common strategy motivates us to sign long-term contracts with customers	no	237	2,66	1,25	0,01
	yes	19	3,42	0,96	

Among their long-term relationships, they use significantly more long-term contracts (p=0.018) for their purchases. The proportion of long-term contracts is also bigger in the case of sales relationships, but the deviation is not significant (p=0.185). From the perspective of the research the most important deviation from the results of other companies concerns their approach to co-operation in partnerships. Companies following an aggressive growth strategy attach significantly more importance to the possibility of joint development (p=0.023) and common strategy (p=0.010) among the motives of long-term customer relationships. Joint problem solving also plays a significantly bigger role (p=0.090) than in companies belonging to the rest of the sample. Therefore we can say that co-operation motives in long-term market relationships are most characteristic of companies following an aggressive growth strategy.

From the results of the three subsamples we can conclude the long-term relationships of small supplier firms aiming to maintain their position are primarily motivated by fierce competition. This is signalled by the fact that their primary concern is to exclude competitors. They try to satisfy their

custommers by realising cost advantages on the supplier side. Companies following an aggressive growth strategy aim to achieve their objectives by cooperating with their customers only. Their motivations linked to supplier relationships are not stronger with respect to co-operation, and this one-sided approach can cast doubts on the successful implementation of the strategy. On the other hands it reflects that the primary way of achieving aggressive growth is through common strategy, joint development activities and joint problem solving with customers.

7.3.4. The subsamples created based on sector of operation

According to my assumptions expressed in the initial hypotheses long-term market contracts are influenced by the characteristics of the given sector. In order to prove this, I examined the differences in the motivating factors of companies in the sample separated based on their industry of operation, and selected three subsamples for detailed analysis.
Sectoral analyses show that companies operating in different sectors differ in two respects. These are the operative motives of customer contracts factor (p=0.004) and the co-operation motives of customer contracts factor (p=0.066). It is important to note that the operative motives of supplier contracts factor (p=0.130) also indicates a considerable deviation. All these support the assumption that the characteristics of the industry influence the motivating factors linked to operations to the greatest extent. The ANOVA table showing the deviations is in Annex 7.

The detailed investigations of sectors focused mostly on companies operating in the manufacturing, commercial and service sectors, which make up most of the sample. The subsample of manufacturing companies is made up of 148 companies, almost half of the entire sample. Commercial companies comprise 10%, while the service sector is represented by 12.1% of companies. The remaining 28% includes companies operating in the agricultural, natural resource, construction, energy and communal services sectors.

7.3.4.1. The subsample of manufacturing companies

Manufacturing firms significantly differ (p=0.022) from other sectors with respect to the factor linked to operative motives of customer contracts. According to the mean values operative motives are stronger here than in other companies. This is further reinforced by the fact that most of the individual variables included in the factor of operative motives of customer contracts also show significant deviations when looked at separately. As regards the motives of co-operating with the customer, the possibilities of a common strategy (p=0.035) and joint development activities (p=0.019) are more emphasised, but the values given are below the mean. The significant deviations are in Table 23, the ANOVA tables are presented in the Annex.

Table 23

Significant deviations of manufacturing firms

	Manufacturing firms				
		N	Mean	Std. Deviation	Sig.
Factor called operative motives of customer contracts	no	114	-0,15	1,007	0,022
	yes	126	0,14	0,996	
Stable capacity utilisation motivates us to sign long-term contracts with customers	no	118	3,66	1,366	0,045
	yes	133	3,98	1,181	
The hope of plannable contracts motivates us to sign long-term contracts with customers	no	119	3,13	1,241	0,078
	yes	133	3,40	1,194	
The hope of future contracts motivates us to sign long-term contracts with customers	no	119	3,13	1,207	0,003
	yes	133	3,57	1,163	
The possibility of knowing the expected order volume motivates us to sign long-term contracts with customers	no	119	3,16	1,278	0,008
	yes	132	3,58	1,179	
Prior knowledge of expected quality requirements motivates us to sign long-term contracts with customers	no	118	3,03	1,198	0,082
	yes	130	3,30	1,199	
Joint development possibilities motivate us to sign long-term contracts with customers	no	118	2,51	1,232	0,019
	yes	132	2,88	1,233	
The possibility of forming a common strategy motivates us to sign long-term contracts with customers	no	119	2,51	1,213	0,035
	yes	132	2,84	1,293	
Flexible ordering within the contracted framework motivates us to sign long-term contracts with suppliers	no	119	3,10	1,294	0,086
	yes	130	3,38	1,229	

7.3.4.2. The subsample of commercial companies

Among the motivating factor of long-term market contracts operative motives linked to customers are less important for commercial companies than in other sectors. Table 24 shows that the examination of the individual variables confirms the conclusion that they are less motivated by operative considerations in their long-term customer contracts. On the other hand, market-related motives of long-term supplier contracts (p=0.042) are the most significant among their motives. The nature of this sector causes these companies to regard the gaining of competitive advantage (p=0.072) to be one of the most important considerations.

Table 24

Significant deviations of commercial companies

	Commercial companies				
		N	Mean	Std. Deviation	Sig.
Factor called operative motives of customer contracts	no	217	0,049	0,993	0,020
	yes	23	-0,467	1,074	
Market-related motives of supplier contracts	no	214	-0,036	1,003	0,042
	yes	25	0,388	0,798	
Stable gross sales revenue motivates us to sign long-term contracts with customers	no	227	3,77	1,27	0,085
	yes	24	3,29	1,37	
Stable utilisation of capacity motivates us to sign long-term contracts with customers	no	227	3,92	1,25	0,001
	yes	24	3,00	1,32	
The hope of future contracts motivates us to sign long-term contracts with customers	no	228	3,41	1,19	0,078
	yes	24	2,96	1,27	
The possibility of knowing the expected order volume motivates us to sign long-term contracts with customers	no	227	3,43	1,22	0,076
	yes	24	2,96	1,37	
Joint development possibilities motivate us to sign long-term contracts with customers	no	226	2,77	1,26	0,037
	yes	24	2,21	1,02	
Gaining advantage over competitors motivates us to sign long-term contracts with suppliers	no	224	2,93	1,33	0,072
	yes	25	3,44	1,47	

7.3.4.3. The subsample of service companies

The subsample of service companies significantly differs from other sectors in the operative motives of its long-term customer relationships (p=0.059). Significant deviations can be found in the variables linked to stable gross sales revenue (0.008), stable utilisation of capacity (0.047) and plannable contracts (0.094) within this factor, these considerations are more important for commercial companies when forming long-term customer relationships. Another very important element of their co-operation with customers is the motive linked to the exclusion of competitors (p=0.026). The results are displayed in Table 25, and the ANOVA tables are in the Annex.

Table 25

Significant deviations of service companies

	Service companies				
		N	Mean	Std. Deviation	Sig.
Factor called operative motives of customer contracts	no	214	-0,04	1,04	0,059
	yes	26	0,35	0,62	
Stable gross sales revenue motivates us to sign long-term contracts with customers	no	223	3,65	1,31	0,008
	yes	28	4,32	0,90	
Stable utilisation of capacity motivates us to sign long-term contracts with customers	no	223	3,78	1,31	0,047
	yes	28	4,29	0,94	
The possibility of plannable contracts motivates us to sign long-term contracts with customers	no	224	3,23	1,24	0,094
	yes	28	3,64	0,99	
The exclusion of competitors motivates us to sign long-term contracts with customers	no	223	2,87	1,37	0,026
	yes	27	3,48	1,12	

Comparing the results from the three sectoral subsamples we can conclude that the biggest difference between these sectors is in the operative motives of contracts with customers. The motivating factors linked to operations are most important for service companies, and are also important for manufacturing firms, while they play a secondary role in commercial companies. Due to the increasingly fierce competition in the commercial sector in Hungary the motive of gaining advantage over competitors is the prime motive in the supplier market.

7.3.5. Results of the regression analysis

I performed a linear regression analysis to confirm the results obtained from the subsamples. The regression analysis performed according to Backward's procedure eliminated any non-significant factors from the regression model.

I obtained significant results for two motivating factors of long-term market relationships. Five percent of the factor linked to operative motives of customer contracts is explained by having a dominant domestic owner (p=0.061), and belonging to the manufacturing industry (p=0.051) and the service sector (p=0.049).

The factor called co-operation motives of customer contracts is significantly influenced by having dominant state ownership (p=0.020), foreign ownership (p=0.005) and domestic ownership (p=0.021). In this case the model offers an explanation for 5.3% of cases. The explanatory power of regression models is not significant. However, if we take into account that the motives of long-term relationships of companies can be influenced by a large number of factors, the results are noteworthy. Furthermore they support the finding that operative motives are most influenced by the sector of operation, while co-operation is most affected by the type of dominant owner. The results of the regression analysis are presented in Annex 8.

7.4. Motives of long-term market relationships and performance

In my research I aimed to explore the differences between companies with different motives linked to their long-term market relationships, and to compare their performance. The most important question was whether companies with different motives perform any differently. In other words do companies that give more emphasis to co-operating with their partners perform better? I used cluster analysis based on the motivating factors created through factor analysis to examine this issue. This allows the sample to be broken down into groups that significantly differ with respect to the created factors. Based on the factors created from individual variables 226 companies could be grouped into clusters. The first table of the analysis is a matrix of 226*6 containing the values of the factors linked to the observed units. As a result of a K-means cluster analysis I differentiated five groups of companies that differ in their motives. The five clusters significantly differ in terms of all six motivating factors[17]. As in the case of motivating factors, I named the groups with different motives (in parenthesis see the number of companies belonging to each group):

Cluster 1 (n=29): indifferent companies
Cluster 2 (n=45): supplier-oriented companies
Cluster 3 (n=41): operations-oriented companies
Cluster 4 (n=75): co-operating companies
Cluster 5 (n=36): buyer market-oriented companies

The summary of numeric data on clusters according to motivating factors is presented in Table 26, which gives a more detailed characterisation of these groups from the perspective of the various factors. The clusters are to be interpreted based on the shaded eigenvalues of the factors.

[17] The F test yielded a significant result of p=0.000 for all six factors

Table 26

Motive clusters characterised by factors

2004 – Final cluster centres		Motive clusters 1	2	3	4	5
N(226) Motivating factors		Indifferent	Supplier-oriented	Operations-oriented	Co-operating	Buyer market-oriented
customer	operations	-1,585	0,430	0,664	0,262	-0,573
	co-operation	-0,638	0,044	-1,092	0,755	0,270
	market-related	-0,746	0,078	-0,002	-0,082	1,032
supplier	operations	-1,402	0,575	0,459	0,098	-0,302
	co-operation	-0,606	0,593	-1,021	0,533	-0,105
	market-related	-0,467	-1,081	0,017	0,768	0,107

I also used the individual variables of the factors to give a more detailed description of the clusters. I grouped the variables based on how they influence the long-term relationships of the given group of companies. If grouped appropriately, we can see which are the most "motivating variables" or the "non-motivating variables" linked to the long-term contracts of the given group (if less distinctive details are dropped). Table 27 presents these results, and Annex 9 gives the mean values of the individual variables included in the analysis, as they relate to the clusters.

Table 27

Motive clusters characterised by individual variables

(the variables and the deviation from the mean)

Clusters	Motivating variables		Non-motivating variables	
Indifferent			Common strategy (s)	-2,10
			Stable utilisation of capacity (c)	-1,95
			Stable gross sales revenue (c)	-1,95
			Knowledge of expected order volume (c)	-1,90
			Plannable contractual conditions (s)	-1,59
Supplier-oriented	Cost reduction possibilities (s)	1,63	Known supplier (s)	-0,92
	Flexibility within the framework of the contract (s)	1,29	The desire to keep the supplier (s)	-0,73
	Cost reduction possibilities (c)	0,82	Common strategy (s)	-0,49
	Predictable purchasing costs (s)	0,48	Common strategy (c)	-0,34
	Flexibility within the framework of the contract (c)	0,47	Customer insists on the contract (c)	-0,24
Operations-oriented	Cost reduction possibilities (s)	0,74	Common strategy (s)	-1,99
	Stable gross sales revenue (c)	0,58	Joint development activities (s)	-1,58
	Cost reduction possibilities (c)	0,49	Common strategy (c)	-1,30
	Stable utilisation of capacity (c)	0,28	Joint problem solving (c)	-1,18
	Predictable purchasing costs (s)	0,27	Joint development activities (c)	-0,84
	Plannable contracts (c)	0,22	Customer insists on the contract (c)	-0,48
	Reliable supply (s)	0,22	Flexibility within the framework of the contract (c)	-0,41
Co-operating	The desire to keep the supplier (s)	1,12	Exclusion of competitors (c)	-0,15
	Flexibility within the framework of the contract (s)	1,11	Customer insists on the contract (c)	-0,10
	Common strategy (c)	0,73	Common strategy (s)	-0,09
	Joint problem solving (c)	0,73		
	Joint development activities (c)	0,68		
	Plannable contracts (c)	0,49		
	Plannable contracts (s)	0,47		
	Stable utilisation of capacity (c)	0,46		
	Joint development activities (s)	0,23		
Buyer market-oriented	Customer insists on the contract (c)	0,84	Common strategy (s)	-1,26
	Joint development activities (c)	0,58	Joint development activities (s)	-0,59
	Flexibility within the framework of the contract (s)	0,45	Stable gross sales revenue (c)	-0,54
	Joint problem solving (c)	0,26	Predictable purchasing costs (s)	-0,40
	Future contracts (c)	0,21	Stable utilisation of capacity (c)	-0,40
	Common strategy (c)	0,18		
	Flexibility within the framework of the contract (c)	0,09		
	Exclusion of competitors (c)	0,08		

Comment: in parenthesis, after the motivating factor, see whether it relates to customer relationships (c) or supplier relationships (s).

Below I will present the characteristics of the companies belonging to the same cluster, emphasising similarities.

1. Indifferent companies (n = 29)

Companies belonging to this group are "undermotivated" in their long-term relationships both with customers and with suppliers. Factors linked to operations are the least motivating in their long-term relationships. Within this factor they are least motivated by stable gross sales revenue, stable utilisation of capacity and the possibility of developing a common strategy with suppliers. This leads us to the conclusion that long-term contracts with customers and suppliers are not necessary for the operation of these companies or are not common in their case. They are presumably not dominant players in the market, working based on separate contracts for each job.

2. Supplier-oriented companies (n = 45)

The key motives of these companies are operative and co-operation motives linked to suppliers. These companies are more motivated to form long-term relationships with their suppliers. They characteristically have a market power position that generates the strongest desire to exclude competitors from sales. Furthermore, cost reduction possibilities are also important for them, it is the biggest motive both on the customer side and on the supplier side. Flexibility within the framework of the contract, predictable purchasing costs and reliable supply are important indicators of supplier contracts. At the same time, the values of motives linked to the desire to keep the supplier and common strategy are below the mean.

3. Operations-oriented companies (n = 41)

In this group the main motive of long-term relationships is to ensure company operations. Cost reduction possibilities, stable utilisation of capacity and stable gross sales revenue are the most important motives in their customer and supplier relationships. They possess weak motivations for co-operation with

partners. They are not motivated by common strategy or any joint development activities with either customers or suppliers.

4. Co-operating companies (n =75)

These companies are most motivated by co-operation possibilities when forming long-term relationships. They are loyal to their suppliers and the flexibility they thus get within the framework of the contract is an important motive for them. They are interested in forming a common strategy with their customers and in joint problem solving. The possibilities of joint development activities are important indicators in their contracts both with customers and with suppliers. Their customer relationships are not characterised by trying to exclude competitors or by an assertion of the customer's superior power. It is important to note that this cluster contains the biggest number of companies. These motives are important for one-third of the 266 companies involved in the cluster analysis.

5. Buyer market-oriented companies (n =36)

In this group the market of buyers determines long-term relationships. Customers insist on signing long-term contracts. Due to the weak bargaining power versus the customer these companies find joint development activities and joint problem solving important. Common strategy with the customer is motivational, but is less important in relation to suppliers. The dependence on the customer is also indicated by the weak motivational role of operative factors linked to customers. Motivating factor values linked to suppliers are below the mean in this cluster.

7.4.1. Performance of clusters

My analyses indicate that the various clusters exhibit different performance characteristics. Performance characteristics are given based on the assessments of top managers who compared the company's performance to the industry average. Figure 7 illustrates the link between key motives and performance characteristics. We can see that the self-evaluation of companies and the motives of long-term market relationships shift together. Companies that regard "modern co-operation factors" to be more important also regard themselves to be more successful than average. The values of the performance characteristics for each cluster are presented in Annex 9.

The results indicate that in companies that focus on operative motives when forming long-term market relationships and neglect co-operation possibilities perform more poorly. The profit margin on sales, the return on capital and market share of *operations-oriented* companies are much lower than average.

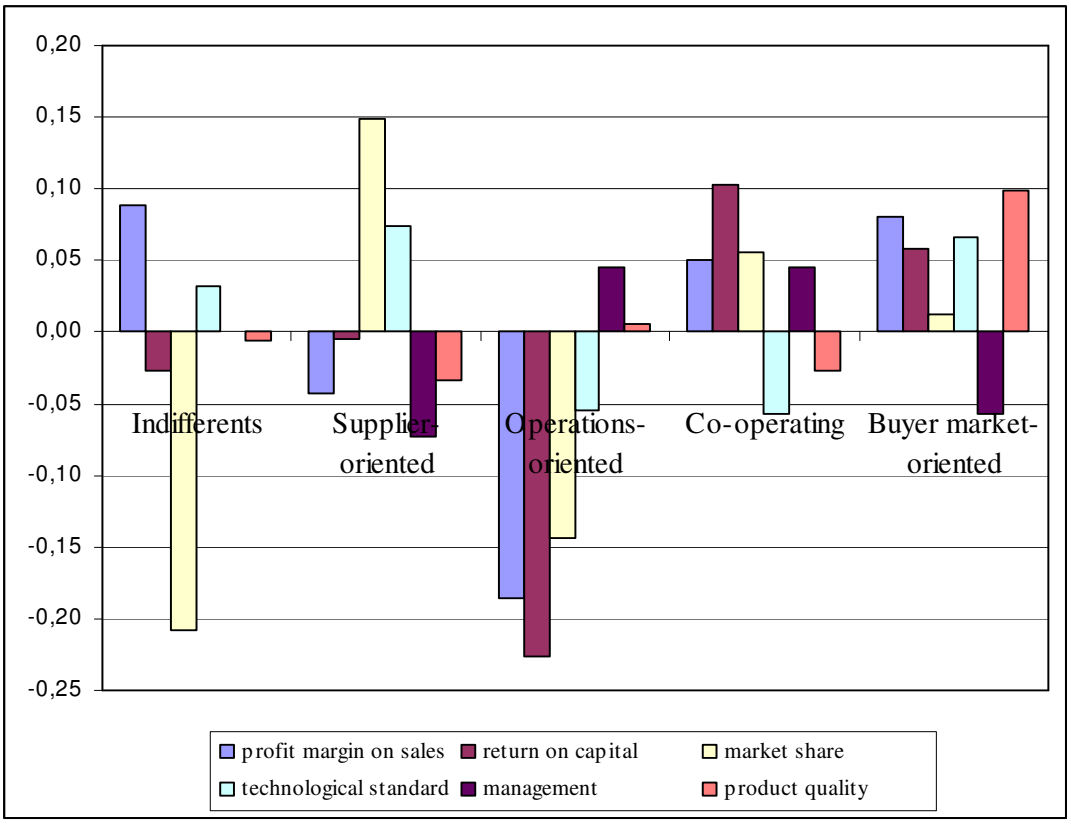
Buyer market-oriented companies produce the best results. In five out of the six indicators they achieve better than average results, they are only below the mean in management. They also have the best product quality indicators, which is linked to their key motive, i.e. to serve the buyer market.

The results of *co-operating* companies are outstanding with respect to return on capital. This supports the assumption that financially more successful companies are more motivated to try new ways of co-operation. Furthermore, companies focusing on co-operation produce above average performance in profit margin on sales, market share and management too. Product quality and technological standard are below the mean, which can also motivate co-operation with partners.
C
ompanies that are *supplier-oriented* in their long-term relationships have considerable market share and advanced technology. Presumably the desire to preserve this causes their supplier-orientation. Co-operation with suppliers might also be motivated by the aim to improve product quality building on their

advanced technology. *Indifferent* companies have low return on capital and insignificant market share. Due to their survival options they are not motivated to form long-term market relationships.

Figure 7

Performance characteristics of clusters



Comment: the figure presents the deviation of performance characteristics from the mean.

In summary, the results of the analysis comparing the motives of long-term market relationships and the performance of the company indicate that companies that focus more on "modern co-operation factors" display better performance. Co-operating companies make up the biggest group, which suggests that the co-operative approach is spreading among Hungarian companies too.

7.5. Evaluation of the hypotheses

In the next section I will evaluate the hypotheses expressed in the research plan, based on the results of the analyses presented in the previous four subchapters. The evaluation of some hypotheses has a subjective element too, as it is difficult to determine an objective measure for "more dominant" or "most influential" etc. A hypothesis was regarded as confirmed if the various results obtained through the research collectively supported it. This "subjectivity" is partly a consequence of the exploratory nature of the research, since the aim was to become familiar with the motives of Hungarian companies linked to long-term market relationships, with the main emphasis on the role of "modern co-operation factors".

1. Motives of Hungarian companies linked to long-term market relationships

H.1.1: Co-operation between partners has grown in importance among factors motivating long-term market relationships

Rejected: The results do not collectively support this hypothesis about the motivating factors of long-term market relationships. The results of the surveys conducted at two different points in time indicate that traditional, operative motives continue to be the main reasons for forming long-term relationships. The use of co-operation possibilities with the partner is still not a primary concern. At the same time, a fit with strategic objectives and joint problem solving are important factors linked to partnership success. We can therefore conclude that Hungarian companies are characterised by the inconsistency of attitude and practice. They know that partnership success depends greatly on strategic fit and joint problem solving, and in their evaluations they often blame the lack of joint problem solving for recent relationship failures, yet they are not motivated to exploit co-operation opportunities with their partners.

2. The role of factors influencing motives of long-term market relationships

2.1. Dominant owner

H2.1a: Companies having a dominant owner consider the motive related to joint activities with partners to be more important when forming long-term market relationships.

Confirmed: Companies that do not have a dominant owner are less motivated to co-operate either with customers or with suppliers. On the customer side the significance level of "undermotivation" is p=0.008, and on the supplier side this value is p=0.087. Based on this we can conclude that companies having a dominant owner find co-operation more important in their long-term market relationships. This suggests that there is a close link between the strategic direction determined by the dominant owner and the closeness of partnerships. Companies without a dominant owner link their long-term market relationships primarily to operations. Companies having a dominant owner consider co-operation with partners to be more important, thus are more conscious about using their long-term relationships in implementing strategy. All this suggests that the existence of a dominant owner leads to a clearer strategic direction with respect to stakeholders. The comparison of company subsamples with different dominant owners proved that companies dominantly in foreign ownership consider joint development efforts and common strategy with suppliers (p=0.081) to be important motives as well as co-operation with customers (p=0.040). Dominantly state-owned or domestic companies are less motivated to co-operate with the supplier side. The regression analysis confirmed the results, which showed that co-operation motives are most influenced by the existence or the type of dominant owner.

The research confirmed the assumption that foreign owners aim to apply their own approach and practice in Hungarian subsidiaries too. In Hungary too they wish to operate by exploiting the advantages of trust-based co-operation that is characteristic of developed market economies. While the approach of Hungarian companies is more one-sided and is more customer-oriented,

companies dominantly in foreign ownership are characterised by a balanced approach. It is important for Hungarian-owned companies to take into account that the value created as a result of closer co-operation with suppliers is a prerequisite for producing value for customers, thus creating value in general.

H2.1b: Companies having a dominant foreign owner are more motivated to co-operate with their suppliers in order to stabilise their supplier network, therefore they regard co-operation as more important among the reasons for entering long-term supplier relationships.

Confirmed: Companies dominantly in foreign ownership are considerably more motivated to co-operate with suppliers than other companies. The deviation of the subsample was significant in this case (p=0.026).

The majority of companies in Hungary that are dominantly in foreign ownership are subsidiaries of multinational companies, thus they deem mutual co-operation with suppliers to be important when establishing and operating their supplier base in Hungary. As regards market-related motives, however, we can say that they are less motivated by the desire to keep the supplier or by prior knowledge of the supplier. It is worth noting that they are also more motivated to co-operate with customers (p=0.147), but the deviation is not significant.

2.2. Industry position

H2.2: Companies that regard themselves to be focal players in their industry aggressively exploit opportunities derived from their powerful position in their long-term market relationships.

Confirmed: The most important characteristic of the focal companies of an industry is that they have considerably stronger bargaining power than their partners. As a result, they are not necessarily forced to co-operate or might wish to co-operate differently with other players in their industry, and they have a wider choice of partners. Their long-term relationships are characteristically motivated by operative factors, and co-operation with partners is not a primary

concern. This is due to their powerful position in the industry which does not force them to use joint problem solving or development activities with their partners. They can do these alone. They regard long-term customer relationships to be more important in implementing their strategy than other companies in their sector (p=0.027). The competition on the market of buyers motivates them to sign long-term sales contracts and to use these contracts to exclude competitors. In this respect, they significantly differ from companies with different industry positions (p=0.011). They refrain from signing long-term contracts with customers if they are thus able to bargain from a position of power. On the supplier side they are not more motivated to gain advantage, because due to their industry position they do not need to be. However, they refrain from signing long-term contracts if they can thus use their bargaining power with respect to their suppliers.

2.3. Strategic objective

H2.3: Companies following an aggressive growth strategy are more inclined to form long-term market relationships with buyers, therefore they regard the reasons for long-term buyer contracts to be more important.

Partially confirmed: The greatest difference between companies expressing an aggressive growth objective and companies with different strategies is that the former are more motivated to co-operate with customers. This was confirmed by a significance level of p=0.093 found in the deviation of the co-operation motive linked to customers contracts. The mean ratings show that operative and market-related motives are also stronger in their customer relationships. However, they are also more motivated to sign long-term supplier contracts than companies with different strategies. They do not lag behind in co-operation with suppliers either.

One of the important results of the research is that among the motives of long-term market relationships, the motive linked to co-operation with partners is most characteristic of companies following an aggressive growth strategy.

2.4. Sector of operation

H2.4: When forming long-term market relationships, the impact of the sector of operation is biggest on motives linked to the operations of the company.

Confirmed: The comparison of sectoral subsamples confirmed that the sector of operation influences the motives of long-term market relationships. This was also confirmed by the results of the regression analysis. Sectors differed mostly with respect to operative motives. Based on the results we can say with 99.6% certainty that companies operating in different sectors differ with respect to operative motives linked to customer relationships. The same can be stated for supplier relationships with a certainty of 87 percent. Based on the results from the subsamples subjected to more detailed analysis the research concluded that operative motives are most significant for service companies, also significant for manufacturing firms, while they assume a secondary role in the commercial sector. Market-related motives are stronger in commercial firms, with the prime focus on the exclusion of competitors.

3. The link between motives of business relationships and company performance

H3: Companies that regard themselves to be relatively more successful and better performers attach more importance to co-operation with partners as a motive of long-term relationships.

Confirmed: The results of the research prove that better performing companies are characterised by a willingness to co-operate with partners. The companies that aim to co-operate with customers or with both suppliers and customers generate the best results.

Based on performance indicators the most successful companies are the ones where co-operation with customers dominates, while the motives of co-operation with suppliers are less dominant. We can usually see that the customer determines the relationships (“the customer insists on the contract”). Therefore these companies are greatly influenced by the strong bargaining power

of their customers, which presumably influences their co-operation motives too. This suggests that companies motivated by the buyer market are suppliers of large companies with financial and market power. Their market share is slightly higher than average and their technological standards and product quality is outstanding, which does not make it necessary for them to implement joint development activities and a common strategy with suppliers.

Companies motivated to co-operate in both directions have ratings below the mean with respect to technological standard and product quality. Therefore the relationships formed with their customers and suppliers are motivated by the improvement of these aspects. Their approach is characterised by a stronger motivation to carry out joint development activities both with customers and with suppliers. This is especially important, since it points towards the emergence of a network approach in this group of companies. In their case we can sense that value created using an appropriate supplier base is the prerequisite of company and customer value creation too. It is worth emphasising that their return on capital is the best among all examined companies. This seems to prove another assumption, namely that companies with adequate return on capital are more open to co-operation with partners. In their case although the satisfaction of business partners clearly contributes to their success, it is just as true that financial success enables them to express different motives in their business relationships.

In summary we can state that companies that focus exclusively on the operative motives of long-term relationships perform poorly. Companies with insignificant market share, poor return on capital, below average product quality are not motivated to form long-term relationships with either customers or suppliers.

The results confirm that the companies with different focus in their motives perform differently. Companies that focus more on co-operation in long-term relationships perform better.

The comparison of the results obtained from the analyses of the entire sample and from the cluster analysis indicates, on one hand, that co-operation motives of long-term market relationships have not become stronger in company practice, but, on the other hand, a significant number of companies (around one-quarter of the entire sample) attach more importance to the motives of joint problem solving, joint development activities and common strategy.

These companies perform better than those that are less interested in co-operation or want to co-operate only in one direction. We can conclude that companies that apply an approach that recognises the importance of the "modern motives" of partnerships when forming long-term market relationships exhibit better performance characteristics. Although this approach spreads slowly and perhaps more time is needed for practical application, the results are definitely promising.

Having regard to the results of the previous surveys as well, we can say that the issue of trust continues to be important in co-operation between partners. Companies managers still regard trust to be a primary criterion of success. Lack of commitment by the partner, as a reason for partnership failure, also reflects the issue of trust. This is not surprising, as the development of a common strategy and joint development activities involve an obligation to share a lot of information with the partner, and companies are only willing to do this in a climate of utmost trust. We can also see signs that the approach that recognises the advantages of co-operation is spreading among Hungarian companies. This is most markedly influenced by the existence of a dominant owner. Trust between economic players needs to grow stronger still in order for this approach to spread further. The almost fifteen years old market economy gained a new dimension with Hungary's accession to the European Union, which may help in building trust between business players.

7.6. Future research options

The research focused on the motives of long-term market relationships of companies in Hungary. In brief, the results suggest that companies attach the greatest importance to motives linked to the operations. Another conclusion is that the dominant owner influences the motivations linked to co-operation between partners. The performance of companies that consider co-operation as well as maintaining operations to be important is more balanced than of operations-oriented companies.

The analysis of the data from the Competitiveness researchprovided a general picture of the motives of Hungarian companies linked to long-term relationships. The correlations explored via quantitative analyses and the possible explanations related to the causalities can be examined and tested through case studies in later projects.
The research project no. F037789 titled *The role of business relationships in value creation* sponsored by OTKA can be considered as a continuation of the present research.

This theme is related to a number of interesting issues and possible research topics. These include:

- Exploration of further details in the analyses of the subsamples in order to extend the factors influencing motivations (e.g. examination of industries within the larger sectors).
- Analysis of subsamples created based on focus of activity (e.g. separation of companies with marketing, logistics and production orientation).
- Examination of the influence of the competitive situation, building on a detailed analysis of market power.
- Analysis of the approach and the practice linked to the management of business relationships.
- The characteristics and value creating role of strategic partnerships within networks can be examined via case studies and

- This same method can also be used to analyse in more detail the establishment of relationship portfolios “tailored to the given companies”, and the associated experiences and obstacles.

Research and pedagogical co-operation among exponents of various fields of management is also necessary in order to create a common terminology and to explore correlations.

Summary

In the Hungarian economy company relationships underwent significant changes in the past one and a half decades. Business relationships between companies disintegrated, were recreated, and by today they have stabilised again. Considerations linked to operating basic company processes continue to govern the formation of relationships in the Hungarian economy today. Yet the motivations of long-term market relationships have become more diversified. Besides operative motives other motives linked to better exploitation of market characteristics have also appeared, and we can see examples of companies aiming to co-operate more closely with partners.

In the present research I examined the motives of long-term market relationships (customer – supplier relationships) to determine the links with strategy. The overview of the literature indicated that interfirm relations play an important role in implementing company strategy. Thus the objectives expressed when forming relationships are important reflections of the company's approach to partnerships. In order to identify these I examined the role of various relationship types in implementing company strategy, the factors linked to relationship success and the motives of forming relationships.

The examination of the business relationships of Hungarian companies indicated that the major rebuilding processes of company organisations have been completed. Organisations have been transformed into efficient operations, which is one of the prerequisites of implementing company strategy. This is supported by the fact that outsourcing and integration no longer play an important role in company strategies. Now long-term market relationships play the most important role in implementing strategy and ties with state organisations also continue to be significant. The ratio of successful long-term market relationships is significant, which indicates that business relationships within company networks have stabilised and that this is an important consideration in implementing company strategy.

According to the results of the research and the previous surveys the issue of trust is still important in the decision to co-operate with given partners. This is not surprising, as the development of a common strategy and joint development activities involve an obligation to share a lot of information with the partner, and companies are only willing to do this in a climate of utmost trust. The results suggest that progress has been made in how well relationships fit with company strategy. Companies tend to regard a fit with their own strategic objectives to be important, and this is a key theoretical consideration when operating relationships. This is a favourable change in attitude, because in the past partners did not link relationships to strategic goals.

In summary, traditional, operative motives continue to be the key motives of companies when forming long-term market relationships. We can also state that the motives of long-term market relationships have become more diversified. Companies give different weight to the various motivating factors. The examination of the sample proves that stronger motives related to joint development activities and joint problem solving have appeared in the Hungarian economy, but these motives are still in the initial adaptation phase, rather than spreading on a wide scale.

The analyses of the approaches within the subsamples allow us to draw the conclusion that companies with a dominant foreign owner build networks more consciously in order to gain some common benefit from long-term co-operations. Companies controlled by the state and domestic owners on the other hand display a stronger desire to exploit market opportunities, exclude competitors and exploit their bargaining power. These latter aims reflect a tactical approach to networking rather than a conscious attitude towards partnerships. Hungarian companies with a dominant foreign owner clearly show the tendency to view partnerships differently, as seen in practice abroad (joint problem solving, joint development activities, common strategy). Their approach is more balanced. Besides customer relationships they make efforts to build their network relationships with suppliers too. They are more consistent in forming relationships, their approach is more advanced with respect to linking strategic objectives and business relationship success, and

they make more effort to make use of co-operation possibilities with partners. All this suggests that the values represented by the foreign owner are manifested in the practice of business relationship management too, in order to implement the strategy. They possess an approach that is used in more developed market economies which means that customer service built on a stable and co-operative supplier base is a very strong motive when they are forming long-term market relationships. State-owned and domestic companies should follow this example by giving more emphasis to their supplier relationships, besides their strong customer orientation, and by implementing the observed co-operative approach.

The results of the examination of long-term market relationships and company performance indicate that companies that attach more importance to joint activities, besides operative motives, exhibit better performance characteristics. Although this approach spreads slowly and perhaps more time is needed for practical application, the results are definitely promising.

Annexes:

Annex 1 – Questions used in the analysis

A. Top manager questionnaire, 2004

I. COMPANY POSITION AND STRATEGY

V8. In the company's network of business relationships how important are the following in implementing company strategy? (1 – not at all important, 3 – moderately important, 5 – of key importance)

a) Long-term supplier relationships	1 2 3 4 5
b) Long-term customer relationships	1 2 3 4 5
c) Licensing contracts	1 2 3 4 5
d) Single sales/purchase transactions	1 2 3 4 5
e) Strategic alliances	1 2 3 4 5
f) Creation of joint venture	1 2 3 4 5
g) Outsourcing agreements	1 2 3 4 5
h) Ties with local institutions	1 2 3 4 5
i) Ties with state organisations	1 2 3 4 5

V9: What percentage of your business relationships was successful in the past three years? .....%

V10. What percentage of your business relationships was unsuccessful in the past three years? .....%

V11: Which factors are most important in achieving success in business relationships at your company? (1 – least important, 3 – moderately important, 5 – of key importance)

a) Commitment	1 2 3 4 5
b) Co-ordination	1 2 3 4 5
c) Mutual dependence	1 2 3 4 5
d) Trust	1 2 3 4 5
e) Information sharing	1 2 3 4 5
f) Quality of communication	1 2 3 4 5
g) Joint problem solving	1 2 3 4 5
h) Fit with the firm's strategic goals	1 2 3 4 5

V12: What were the reasons for the failure of business relationships at your company?

(1 – not important, 3 – moderately important, 5 – of key importance)

a) Lack of commitment by partner			1	2	3	4	5
b) Lack of commitment by our company	1	2	3	4	5		
c) Relationship did not fit with strategic goals	1	2	3	4	5		
d) Overdependence	1	2	3	4	5		
e) Lack of trust			1	2	3	4	5
f) Bad information sharing	1	2	3	4	5		
g) Lack of joint problem solving	1	2	3	4	5		

V13: Is your company a central player in the industry network that is able to exert an influence on the other players of the supply chain?

yes no

V17: Compare the performance of your company or of the core activity (in case of several activities) to the industry average (in the Hungarian market) based on the following:
1 – much worse than the industry average
2 – somewhat weaker than the industry average
3 – similar to the industry average
4 – somewhat better than the industry average
5 – top-notch performance in the industry

a)	Profit margin on sales	1	2	3	4	5
b)	Return on capital	1	2	3	4	5
c)	Market share (based on sales revenue)	1	2	3	4	5
d)	Technological standard	1	2	3	4	5
e)	Management	1	2	3	4	5
f)	Product/service quality	1	2	3	4	5

B. Commercial questionnaire, 2004

GENERAL MARKET POSITION

K9: Please indicate the fundamental objective established in your market strategy? (Only indicate one answer)

Objectives

1) maintaining market position.....
2) moderate growth .....
3) aggressive growth .....

II. LONG-TERM MARKET RELATIONSHIPS

K16: What % of company sales are based on long-term contracts? (Please indicate the appropriate number)

	1	2	3	4	5
%:	0 - 20	21 - 40	41 - 60	61 - 80	81 - 100

K17. What % of all purchases is based on long-term contracts?

	1	2	3	4	5
%:	0 - 20	21 - 40	41 - 60	61 - 80	81 - 100

K18: Why do you sign long-term contracts with some customers? (1 – not an important consideration, 2 – of little importance, 3 – moderately important, 4 – important, 5 – of key importance)

a) Stable gross sales revenue 1 2 3 4 5
b) Stable utilisation of capacity 1 2 3 4 5
c) Hope of plannable contracts ..... 1 2 3 4 5 .....
d) Hope of future contracts 1 2 3 4 5
e) Prior knowledge of volume requirements 1 2 3 4 5
f) Prior knowledge of quality requirements 1 2 3 4 5
g) Joint development possibilities 1 2 3 4 5
h) Joint problem solving 1 2 3 4 5
i) Possibility of common strategy 1 2 3 4 5
j) Flexibility within the framework of the contract 1 2 3 4 5
k) Cost reduction possibilities 1 2 3 4 5

l) Customer insists on it 1 2 3 4 5
m) Exclusion of competitors 1 2 3 4 5
n) More favourable transport and storage conditions 1 2 3 4 5
o) Other, namely: 1 2 3 4 5

K20: Why do you sign long-term contracts with some suppliers? (1 – not an important consideration, 2 – of little importance, 3 – moderately important, 4 – important, 5 – of key importance)

a) Predictable purchasing costs 1 2 3 4 5
b) Reliable supply 1 2 3 4 5
c) Plannable contractual conditions .....1 2 3 4 5 .....
d) Hope of future contracts 1 2 3 4 5
e) The desire to keep the supplier.....1 2 3 4 5
f) Known supplier 1 2 3 4 5
g) Reliable, known quality 1 2 3 4 5
h) Joint development possibility.....1 2 3 4 5
i) Flexibly ordering within the framework of the contract 1 2 3 4 5
j) Possibility of common strategy with supplier 1 2 3 4 5
k) Cost reduction possibilities 1 2 3 4 5
l) Supplier insists on it 1 2 3 4 5
m) Secure advantage over competitors in supply 1 2 3 4 5
n) More favourable transport and storage conditions 1 2 3 4 5
o) Other, namely: 1 2 3 4 5

Annex 2 – Results linked to long-term market relationships

2.1 Cross-reference tables linked to long-term market relationships

1999

		Purchasing through long-term contracts (%)					Total
		0-20%	21-40%	41-60%	61-80%	81-100%	
Selling through long-term contracts (%)	0-20%	91	13	8	2	5	119
	%	71,1%	31,0%	20,5%	4,3%	17,2%	41,9%
	21-40%	14	13	5	3		35
	%	10,9%	31,0%	12,8%	6,5%	0,0%	12,3%
	41-60%	8	7	11	4	1	31
	%	6,3%	16,7%	28,2%	8,7%	3,4%	10,9%
	61-80%	6	8	9	25	4	52
	%	4,7%	19,0%	23,1%	54,3%	13,8%	18,3%
	81-100%	9	1	6	12	19	47
	%	7,0%	2,4%	15,4%	26,1%	65,5%	16,5%
Total		128	42	39	46	29	284
	%	45,1%	14,8%	13,7%	16,2%	10,2%	100,0%

2004

		Purchasing through long-term contracts (%)					Total
		0-20%	21-40%	41-60%	61-80%	81-100%	
Selling through long-term contracts (%)	0-20%	86	16	7	12	5	126
	%	75,4%	33,3%	24,1%	22,2%	13,9%	44,8%
	21-40%	10	11	4	7	1	33
	%	8,8%	22,9%	13,8%	13,0%	2,8%	11,7%
	41-60%	8	11	6	6	4	35
	%	7,0%	22,9%	20,7%	11,1%	11,1%	12,5%
	61-80%	2	4	6	18	1	31
	%	1,8%	8,3%	20,7%	33,3%	2,8%	11,0%
	81-100%	8	6	6	11	25	56
	%	7,0%	12,5%	20,7%	20,4%	69,4%	19,9%
Total		114	48	29	54	36	281
	%	40,6%	17,1%	10,3%	19,2%	12,8%	100,0%

2.2. Cross-reference tables linked to the motives of long-term market relationships

		The possibility of plannable contracts motivates us to sign long-term contracts with suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
The possibility of plannable contracts motivates us to sign long-term contracts with customers	unimportant	12	2	6	9	5	34
	of little importance	1	2	4	9	2	18
	moderately important	2		19	40	12	73
	important	1	5	13	50	16	85
	of key importance	1	1	3	10	19	34
Total		17	10	45	118	54	244

		Reliability motivates us to sign long-term contracts with suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
Knowledge of expected quality requirements motivates us to sign long-term contracts with customers	unimportant	9	1	6	13	5	34
	of little importance		1	9	12	1	23
	moderately important	4	3	23	29	19	78
	important	1	2	12	34	24	73
	of key importance	1	2	1	9	19	32
Total		15	9	51	97	68	240

		Joint development possibilities motivate us to sign long-term contracts with some supplier					Total
		unimportant	of little importance	moderately important	important	of key importance	
Joint development possibilities motivate us to sign long-term contracts with customers	unimportant	34	5	4	6	1	50
	of little importance	9	20	15	5	2	51
	moderately important	3	9	27	17	3	59
	important	3	10	19	25	6	63
	of key importance	4	1	1	7	5	18
Total		53	45	66	60	17	241

		The possibility of forming a common strategy motivates us to sign long-term contracts with some suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
The possibility of forming a common strategy motivates us to sign long-term contracts with some customers	unimportant	36	7	2	7		52
	of little importance	9	22	17	5		53
	moderately important	4	7	32	15	1	59
	important	7	8	12	30	6	63
	of key importance	3	1	3	5	5	17
Total		59	45	66	62	12	244

		Cost reduction motivates us to sign long-term contracts with suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
Cost reduction motivates us to sign long-term contracts with customers	unimportant	20	2	5	5	6	38
	of little importance	1	1	10	9	4	25
	moderately important	1	3	26	26	7	63
	important		6	9	38	23	76
	of key importance	2	1	4	11	24	42
Total		24	13	54	89	64	244

		Gaining advantage over competitors motivates us to sign long-term contracts with some suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
The exclusion of competitors motivates us to sign long-term contracts with customers	unimportant	26	4	13	6	3	52
	of little importance	5	7	8	7	2	29
	moderately important	5	15	18	22	4	64
	important	4	7	14	23	13	61
	of key importance	7	5	5	11	10	38
Total		47	38	58	69	32	244

		More favourable transport and storage conditions motivate us to sign long-term contracts with some suppliers					Total
		unimportant	of little importance	moderately important	important	of key importance	
Transport and storage conditions motivate us to sign long-term contracts with customers	unimportant	28	1	9	10	5	53
	of little importance	7	11	10	11	2	41
	moderately important	6	11	17	19	7	60
	important	1	7	11	35	7	61
	of key importance	1		3	8	12	24
Total		43	30	50	83	33	239

Annex 3 – Results of the factor analysis

Rotated factor matrix

Motives of customer contracts	1	2	3
Stable gross sales revenue	0,803	0,186	0,060
Stable utilisation of capacity	0,831	0,160	0,117
Plannable contracts	0,751	0,155	0,195
Future contracts	0,585	0,282	0,334
Knowledge of expected order volume	0,686	0,323	0,227
Cost reduction possibilities	0,580	0,437	0,132
Joint development activities	0,243	0,764	0,261
Joint problem solving	0,194	0,848	0,158
Common strategy	0,151	0,834	0,206
Flexibility within the framework of the contracts	0,368	0,736	0,009
Customer insists on the contract	0,104	0,210	0,855
Exclusion of competitors	0,415	0,162	0,628

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 5 iterations.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Compo-nent	Total	% of Variance	Cumula-tive %	Total	% of Variance	Cumula-tive %	Total	% of Variance	Cumulative %
1	5,772	48,100	48,100	5,772	48,100	48,100	3,485	29,045	29,045
2	1,392	11,596	59,696	1,392	11,596	59,696	3,070	25,584	54,628
3	0,889	7,406	67,103	0,889	7,406	67,103	1,497	12,474	67,103
4	0,787	6,562	73,665						
5	0,654	5,448	79,112						
6	0,576	4,796	83,908						
7	0,407	3,391	87,300						
8	0,380	3,164	90,463						
9	0,337	2,809	93,272						
10	0,291	2,427	95,699						
11	0,273	2,273	97,972						
12	0,243	2,028	100,000						

Extraction Method: Principal Component Analysis.

Rotated factor matrix

Motives of supplier contracts	1	2	3
Predictable purchasing costs (s)	0,834	0,125	0,106
Reliable supply (s)	0,818	0,069	0,173
Plannable contractual conditions (s)	0,697	0,226	0,347
Cost reduction possibility (s)	0,673	0,439	-0,007
The desire to keep the supplier (s)	0,202	0,206	0,835
Known supplier (s)	0,128	0,189	0,867
Joint development possibilities (s)	0,119	0,856	0,223
Flexibility within the framework of the contract (s)	0,485	0,631	0,112
Common strategy (s)	0,154	0,851	0,227

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 5 iterations.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Compo-nent	Total	% of Variance	Cumula-tive %	Total	% of Variance	Cumula-tive %	Total	% of Variance	Cumula-tive %
1	4,257	47,298	47,298	4,257	47,298	47,298	2,634	29,272	29,272
2	1,270	14,113	61,412	1,270	14,113	61,412	2,198	24,419	53,691
3	1,031	11,452	72,864	1,031	11,452	72,864	1,726	19,173	72,864
4	0,535	5,950	78,814						
5	0,447	4,962	83,776						
6	0,436	4,843	88,618						
7	0,414	4,595	93,214						
8	0,339	3,763	96,977						
9	0,272	3,023	100,000						

Extraction Method: Principal Component Analysis.

Annex 4 – Results of the subsamples created based on the type of dominant owner

Abbreviations:
VFACMUK: Operative motives of customer contracts factor
VFACEGYU: Co-operation motives of customer contracts factor
VFACPIAC: Market-related motives of customer contracts factor
SFACMUK: Operative motives of supplier contracts factor
SFACEGYU: Co-operation motives of supplier contracts factor
SFACPIAC: Market-related motives of supplier contracts factor

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	2,968	3	0,989	1,160	0,327
	Within Groups	128,747	151	0,853		
	Total	131,714	154			
VFACEGYU	Between Groups	7,865	3	2,622	2,834	0,040
	Within Groups	139,674	151	0,925		
	Total	147,538	154			
VFACPIAC	Between Groups	2,795	3	0,932	0,875	0,456
	Within Groups	160,815	151	1,065		
	Total	163,610	154			
SFACMUK	Between Groups	2,624	3	0,875	0,941	0,423
	Within Groups	145,019	156	0,930		
	Total	147,642	159			
SFACEGYU	Between Groups	7,316	3	2,439	2,281	0,081
	Within Groups	166,778	156	1,069		
	Total	174,094	159			
SFACPIAC	Between Groups	6,890	3	2,297	2,442	0,066
	Within Groups	146,710	156	0,940		
	Total	153,601	159			
Ties with local institutions are important in implementing strategy	Between Groups	9,751	3	3,250	2,707	0,047
	Within Groups	214,916	179	1,201		
	Total	224,667	182			
Ties with state organisations are important in implementing strategy	Between Groups	26,773	3	8,924	6,828	0,000
	Within Groups	235,265	180	1,307		
	Total	262,038	183			
What % of all purchases is based on long-term contracts?	Between Groups	19,169	3	6,390	2,744	0,045
	Within Groups	393,513	169	2,328		
	Total	412,682	172			

Values of the co-operation motives of customer contracts factor

OWNER75		N	Mean	Std. Deviation
State ownership over 75	VFACEGYU	26	0,137	1,075
	Valid N (listwise)	26		
Foreign owner over 75	VFACEGYU	34	0,254	0,796
	Valid N (listwise)	34		
Domestic owner over 75	VFACEGYU	80	0,034	0,993
	Valid N (listwise)	80		
No dominant owner over 75	VFACEGYU	15	-0,595	0,923
	Valid N (listwise)	15		

Values of the co-operation motives of supplier contracts factor

TULAJ75		N	Mean	Std. Deviation
State ownership over 75	SFACEGYU	28	-0,002	1,021
	Valid N (listwise)	28		
Foreign owner over 75	SFACEGYU	35	0,390	0,950
	Valid N (listwise)	35		
Domestic owner over 75	SFACEGYU	79	-0,007	1,047
	Valid N (listwise)	79		
No dominant owner over 75	SFACEGYU	18	-0,356	1,149
	Valid N (listwise)	18		

Values of the market-related motives of supplier contracts factor

TULAJ75		N	Mean	Std. Deviation
State ownership over 75	SFACPIAC	28	0,335	0,931
	Valid N (listwise)	28		
Foreign owner over 75	SFACPIAC	35	-0,231	0,961
	Valid N (listwise)	35		
Domestic owner over 75	SFACPIAC	79	0,192	0,999
	Valid N (listwise)	79		
No dominant owner over 75	SFACPIAC	18	-0,120	0,909
	Valid N (listwise)	18		

4.1. The subsample of dominantly state-owned companies

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Ties with local institutions are important in implementing strategy	Between Groups	8,971	1	8,971	7,528	0,007
	Within Groups	215,696	181	1,192		
	Total	224,667	182			
Ties with state organisations are important in implementing strategy	Between Groups	26,324	1	26,324	20,325	0,000
	Within Groups	235,715	182	1,295		
	Total	262,038	183			
The desire to keep the supplier motivates us to sign a long-term contract	Between Groups	5,941	1	5,941	4,097	0,045
	Within Groups	237,842	164	1,450		
	Total	243,783	165			
We do not sign long-term contracts with suppliers to be more able to bargain from a position of power	Between Groups	8,800	1	8,800	6,799	0,010
	Within Groups	195,448	151	1,294		
	Total	204,248	152			

4.2. The subsample of companies with a dominant foreign owner

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	2,154	1	2,154	2,544	0,113
	Within Groups	129,560	153	0,847		
	Total	131,714	154			
VFACEGYU	Between Groups	2,020	1	2,020	2,124	0,147
	Within Groups	145,518	153	0,951		
	Total	147,538	154			
VFACPIAC	Between Groups	0,318	1	0,318	0,298	0,586
	Within Groups	163,292	153	1,067		
	Total	163,610	154			
SFACMUK	Between Groups	0,171	1	0,171	0,183	0,669
	Within Groups	147,472	158	0,933		
	Total	147,642	159			
SFACEGYU	Between Groups	5,428	1	5,428	5,084	0,026
	Within Groups	168,666	158	1,068		
	Total	174,094	159			
SFACPIAC	Between Groups	4,591	1	4,591	4,868	0,029
	Within Groups	149,009	158	0,943		
	Total	153,601	159			

Values of the co-operation motives of customer contracts factor

Descriptive Statistics				
KUL75		N	Mean	Std. Deviation
no	VFACEGYU	121	-0,022	1,019
	Valid N (listwise)	121		
yes	VFACEGYU	34	0,254	0,796
	Valid N (listwise)	34		

Values of the individual variables of the co-operation motives of customer contracts factor

Descriptive Statistics				
Foreign owner over 75%		N	Mean	Std. Deviation
no	Joint development possibilities	127	2,72	1,22
	Joint problem solving	126	2,72	1,23
	Common strategy	127	2,78	1,27
	Flexibility within the framework of the contract	126	3,06	1,13
	Valid N (listwise)	124		
yes	Joint development possibilities	35	3,14	1,06
	Joint problem solving	35	2,94	1,08
	Common strategy	35	3,00	1,08
	Flexibility within the framework of the contract	35	3,00	0,97
	Valid N (listwise)	35		

Values of the co-operation motives of supplier contracts factor

Descriptive Statistics				
KUL75		N	Mean	Std. Deviation
no	SFACEGYU	125	-0,056	1,055
	Valid N (listwise)	125		
yes	SFACEGYU	35	0,390	0,950
	Valid N (listwise)	35		

Values of the individual variables of the co-operation motives of supplier contracts factor

Descriptive Statistics				
Foreign owner over 75%		N	Mean	Std. Deviation
no	Joint development possibilities	129	2,76	1,27
	Flexible ordering within the framework of the contract	130	3,24	1,23
	Common strategy	131	2,67	1,23
	Valid N (listwise)	128		
yes	Joint development possibilities	36	3,08	1,16
	Flexible ordering within the framework of the contract	36	3,56	1,21
	Common strategy	36	3,08	1,18
	Valid N (listwise)	36		

Values of the market-related motives of supplier contracts factor

Descriptive Statistics				
KUL75		N	Mean	Std. Deviation
no	SFACPIAC	125	0,179	0,974
	Valid N (listwise)	125		
yes	SFACPIAC	35	-0,231	0,961
	Valid N (listwise)	35		

Values of the individual variables of the market-related motives of supplier contracts factor

Descriptive Statistics				
Foreign owner over 75%		N	Mean	Std. Deviation
no	The desire to keep the supplier	130	3,04	1,23
	Known supplier	129	2,87	1,19
	Valid N (listwise)	128		
yes	The desire to keep the supplier	36	2,69	1,14
	Known supplier	35	2,54	1,15
	Valid N (listwise)	35		

4.3. The subsample of companies with no dominant owner

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	0,363	1	0,363	0,423	0,516
	Within Groups	131,351	153	0,859		
	Total	131,714	154			
VFACEGYU	Between Groups	6,680	1	6,680	7,256	0,008
	Within Groups	140,858	153	0,921		
	Total	147,538	154			
VFACPIAC	Between Groups	2,008	1	2,008	1,901	0,170
	Within Groups	161,602	153	1,056		
	Total	163,610	154			
SFACMUK	Between Groups	2,061	1	2,061	2,236	0,137
	Within Groups	145,582	158	0,921		
	Total	147,642	159			
SFACEGYU	Between Groups	3,198	1	3,198	2,957	0,087
	Within Groups	170,896	158	1,082		
	Total	174,094	159			
SFACPIAC	Between Groups	0,888	1	0,888	0,919	0,339
	Within Groups	152,713	158	0,967		
	Total	153,601	159			

Values of the co-operation motives of customer contracts factor

No dominant owner over 75%		N	Mean	Std. Deviation
no	VFACEGYU	140	0,107	0,963
	Valid N (listwise)	140		
yes	VFACEGYU	15	-0,595	0,923
	Valid N (listwise)	15		

Values of the individual variables of the co-operation motives of customer contracts factor

No dominant owner over 75%		N	Mean	Std. Deviation
no	Joint development possibilities	144	2,83	1,218
	Joint problem solving	143	2,83	1,204
	Common strategy	144	2,87	1,236
	Flexibility within the framework of the contract	143	3,13	1,070
	Valid N (listwise)	141		
yes	Joint development possibilities	18	2,61	1,037
	Joint problem solving	18	2,28	1,074
	Common strategy	18	2,50	1,150
	Flexibility within the framework of the contract	18	2,33	1,085
	Valid N (listwise)	18		

Values of the co-operation motives of supplier contracts factor

No dominant owner over 75%		N	Mean	Std. Deviation
no	SFACEGYU	142	0,092	1,026
	Valid N (listwise)	142		
yes	SFACEGYU	18	-0,356	1,149
	Valid N (listwise)	18		

Values of the individual variables of the co-operation motives of supplier contracts factor

No dominant owner over 75%		N	Mean	Std. Deviation
no	Joint development possibilities	147	2,88	1,244
	Flexible ordering within the framework of the contract	148	3,32	1,224
	Common strategy	149	2,82	1,225
	Valid N (listwise)	146		
yes	Joint development possibilities	18	2,44	1,247
	Flexible ordering within the framework of the contract	18	3,22	1,309
	Common strategy	18	2,28	1,179
	Valid N (listwise)	18		

Annex 5 – Results of the subsamples created based on industry position

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Long-term sales relationships are important in implementing strategy	Between Groups	2,570	1	2,570	4,910	0,027
	Within Groups	152,808	292	0,523		
	Total	155,378	293			
Licensing contracts are important in implementing strategy	Between Groups	6,023	1	6,023	5,312	0,022
	Within Groups	326,546	288	1,134		
	Total	332,569	289			
Strategic alliances are important in implementing strategy	Between Groups	16,636	1	16,636	12,094	0,001
	Within Groups	401,667	292	1,376		
	Total	418,303	293			
The establishment of a joint venture is important in implementing strategy	Between Groups	8,477	1	8,477	7,187	0,008
	Within Groups	340,850	289	1,179		
	Total	349,326	290			
Outsourcing agreements are important in implementing strategy	Between Groups	13,918	1	13,918	11,799	0,001
	Within Groups	331,467	281	1,180		
	Total	345,385	282			
Ties with local institutions are important in implementing strategy	Between Groups	5,826	1	5,826	4,666	0,032
	Within Groups	363,341	291	1,249		
	Total	369,167	292			
Ties with state organisations are important in implementing strategy	Between Groups	22,862	1	22,862	16,678	0,000
	Within Groups	400,267	292	1,371		
	Total	423,129	293			
What % of company sales are based on long-term contracts?	Between Groups	10,800	1	10,800	4,283	0,039
	Within Groups	721,200	286	2,522		
	Total	732,000	287			
What % of all purchases are based on long-term contracts?	Between Groups	28,376	1	28,376	13,301	0,000
	Within Groups	586,671	275	2,133		
	Total	615,047	276			
The exclusion of competitors motivates us to sign long-term contracts with customers	Between Groups	11,942	1	11,942	6,488	0,011
	Within Groups	465,666	253	1,841		
	Total	477,608	254			
We do not sign long-term contracts with customers because we want to use our position of power	Between Groups	10,008	1	10,008	8,338	0,004
	Within Groups	290,496	242	1,200		
	Total	300,504	243			
We do not sign long-term contracts with suppliers to be more able to bargain from a position of power	Between Groups	10,894	1	10,894	8,249	0,004
	Within Groups	314,290	238	1,321		
	Total	325,183	239			

5.1. Cross-reference tables of long-term market relationships

		Ratio of successful relationships %						Total
		below 50	50 - 60	61 - 70	71-80	81 - 90	91-100	
Focal player able to exert an influence over the other players of the supply chain?	no	9	32	28	55	28	22	174
	%	5%	18%	16%	32%	16%	13%	65%
	yes	6	11	12	26	26	12	93
	%	6%	12%	13%	28%	28%	13%	35%
		15	43	40	81	54	34	267
Total	%	6%	16%	15%	30%	20%	13%	100%

		Ratio of unsuccessful relationships %						
		below 00	11 - 20	21 - 30	31-40	41 - 50	51-60	Total
Focal player able to exert an influence over the other players of the supply chain?	no	25	82	27	20	16	2	172
	%	15%	48%	16%	12%	9%	1%	66%
	yes	13	50	15	11		1	90
	%	14%	56%	17%	12%	0%	1%	
		38	132	42	31	16	3	262
Total	%	15%	50%	16%	12%	6%	1%	100%

		What % of company sales are based on long-term contracts?					
		0-20	21-40	41-60	61-80	81-100	Total
Focal player able to exert an influence over the other players of the supply chain?	no	86	20	29	15	30	180
	%	48%	11%	16%	8%	17%	63%
	yes	42	13	10	16	27	108
	%	39%	12%	9%	15%	25%	38%
		128	33	39	31	57	288
Total	%	44%	11%	14%	11%	20%	100%

		What % of all purchases are based on long-term contracts?					
		0-20	21-40	41-60	61-80	81-100	Total.
Focal player able to exert an influence over the other players of the supply chain?	no	83	31	14	32	15	175
		47%	18%	8%	18%	9%	63%
	yes	29	16	15	21	21	102
		28%	16%	15%	21%	21%	37%
		112	47	29	53	36	277
Total		40%	17%	10%	19%	13%	100%

Annex 6 – Results of the subsamples created based company strategy

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
What % of all purchases are based on long-term contracts?	Between Groups	23,727	2	11,864	5,477	0,005
	Within Groups	593,478	274	2,166		
	Total	617,206	276			
The possibility of joint development motivates us to sign long-term contracts with customers	Between Groups	8,991	2	4,496	2,951	0,054
	Within Groups	382,336	251	1,523		
	Total	391,327	253			
The possibility of forming a common strategy motivates us to sign long-term contracts with customers	Between Groups	11,103	2	5,552	3,649	0,027
	Within Groups	383,422	252	1,522		
	Total	394,525	254			
The exclusion of competitors motivates us to sign long-term contracts with customers	Between Groups	10,903	2	5,452	2,980	0,053
	Within Groups	461,034	252	1,830		
	Total	471,937	254			
Cost reduction motivates us to sign long-term contracts with suppliers	Between Groups	10,827	2	5,413	3,681	0,027
	Within Groups	372,111	253	1,471		
	Total	382,938	255			

6.1. The subsample of companies aiming to maintain their market position

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Long-term supplier relationships are important in implementing the strategy	Between Groups	4,060	1	4,060	4,076	0,044
	Within Groups	286,823	288	0,996		
	Total	290,883	289			
Long-term customer relationships are important in implementing the strategy	Between Groups	3,344	1	3,344	6,376	0,012
	Within Groups	151,069	288	0,525		
	Total	154,414	289			
Plannable contracts motivate us to sign long-term contracts with customers	Between Groups	7,408	1	7,408	5,156	0,024
	Within Groups	366,421	255	1,437		
	Total	373,829	256			
The exclusion of competitors motivates us to sign long-term contracts with customers	Between Groups	8,039	1	8,039	4,365	0,038
	Within Groups	467,820	254	1,842		
	Total	475,859	255			
Transport and storage conditions motivate us to sign long-term contracts with customers	Between Groups	7,085	1	7,085	4,267	0,040
	Within Groups	418,462	252	1,661		
	Total	425,547	253			
Cost reduction motivates us to sign long-term contracts with suppliers	Between Groups	7,330	1	7,330	4,951	0,027
	Within Groups	377,534	255	1,481		
	Total	384,864	256			

6.2. The subsample of companies following a moderate growth strategy

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
What % of all purchases are based on long-term contracts?	Between Groups	14,278	1	14,278	6,533	0,011
	Within Groups	603,190	276	2,185		
	Total	617,468	277			
The exclusion of competitors motivates us to sign long-term contracts with customers	Between Groups	9,801	1	9,801	5,342	0,022
	Within Groups	466,058	254	1,835		
	Total	475,859	255			
Transport and storage conditions motivate us to sign long-term contracts with customers	Between Groups	6,746	1	6,746	4,059	0,045
	Within Groups	418,802	252	1,662		
	Total	425,547	253			
The desire to keep the supplier motivates us to sign a long-term contract	Between Groups	7,223	1	7,223	4,889	0,028
	Within Groups	373,812	253	1,478		
	Total	381,035	254			
Cost reduction motivates us to sign long-term contracts with suppliers	Between Groups	6,017	1	6,017	4,050	0,045
	Within Groups	378,847	255	1,486		
	Total	384,864	256			

6.3. The subsample of companies following an aggressive growth strategy

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	0,112	1	0,112	0,113	0,737
	Within Groups	239,835	243	0,987		
	Total	239,947	244			
VFACEGYU	Between Groups	2,817	1	2,817	2,836	0,093
	Within Groups	241,391	243	0,993		
	Total	244,208	244			
VFACPIAC	Between Groups	0,320	1	0,320	0,318	0,573
	Within Groups	244,656	243	1,007		
	Total	244,976	244			
SFACMUK	Between Groups	0,269	1	0,269	0,265	0,607
	Within Groups	247,665	244	1,015		
	Total	247,933	245			
SFACEGYU	Between Groups	0,001	1	0,001	0,001	0,970
	Within Groups	246,483	244	1,010		
	Total	246,485	245			
SFACPIAC	Between Groups	0,982	1	0,982	0,981	0,323
	Within Groups	244,423	244	1,002		
	Total	245,405	245			

Values of the co-operation motives of customer contracts factor

Strategic objective		N	Mean	Std. Deviation
maintaining market position	VFACEGYU	71	0,016	1,010
	Valid N (listwise)	71		
moderate growth	VFACEGYU	155	-0,061	0,999
	Valid N (listwise)	155		
aggressive growth	VFACEGYU	18	0,384	0,811
	Valid N (listwise)	18		

Values of the individual variables of the co-operation motives of customer contracts factor

Strategic objective		N	Mean	Std. Deviation
maintaining market position	Joint development possibilities	74	2,77	1,188
	Joint problem solving	75	2,84	1,151
	Common strategy	75	2,73	1,245
	Flexibility within the framework of the contract	73	3,05	1,189
	Valid N (listwise)	72		
moderate growth	Joint development possibilities	161	2,65	1,287
	Joint problem solving	161	2,62	1,265
	Common strategy	161	2,61	1,255
	Flexibility within the framework of the contract	159	2,86	1,183
	Valid N (listwise)	158		
aggressive growth	Joint development possibilities	19	3,37	0,895
	Joint problem solving	18	2,89	0,900
	Common strategy	19	3,42	0,961
	Flexibility within the framework of the contract	19	3,11	0,875
	Valid N (listwise)	18		

Annex 7 – Results of the subsamples created based on sector of operation

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	20,639	7	2,948	3,062	0,004
	Within Groups	223,368	232	0,963		
	Total	244,008	239			
VFACEGYU	Between Groups	13,440	7	1,920	1,928	0,066
	Within Groups	231,084	232	0,996		
	Total	244,524	239			
VFACPIAC	Between Groups	2,001	7	0,286	0,285	0,959
	Within Groups	232,393	232	1,002		
	Total	234,394	239			
SFACMUK	Between Groups	11,346	7	1,621	1,623	0,130
	Within Groups	230,761	231	0,999		
	Total	242,107	238			
SFACEGYU	Between Groups	9,088	7	1,298	1,304	0,249
	Within Groups	230,068	231	0,996		
	Total	239,156	238			
SFACPIAC	Between Groups	11,588	7	1,655	1,723	0,105
	Within Groups	221,970	231	0,961		
	Total	233,558	238			

7.1. The subsample of manufacturing companies

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	5,334	1	5,334	5,319	0,022
	Within Groups	238,674	238	1,003		
	Total	244,008	239			
VFACEGYU	Between Groups	1,720	1	1,720	1,686	0,195
	Within Groups	242,804	238	1,020		
	Total	244,524	239			
VFACPIAC	Between Groups	0,227	1	0,227	0,231	0,631
	Within Groups	234,167	238	0,984		
	Total	234,394	239			
SFACMUK	Between Groups	0,324	1	0,324	0,318	0,573
	Within Groups	241,783	237	1,020		
	Total	242,107	238			
SFACEGYU	Between Groups	1,949	1	1,949	1,947	0,164
	Within Groups	237,207	237	1,001		
	Total	239,156	238			
SFACPIAC	Between Groups	0,028	1	0,028	0,028	0,867
	Within Groups	233,530	237	0,985		
	Total	233,558	238			
Stable utilisation of capacity motivates us to sign long-term contracts with customers	Between Groups	6,562	1	6,562	4,060	0,045
	Within Groups	402,411	249	1,616		
	Total	408,972	250			
The possibility of plannable contracts motivates us to sign long-term contracts with	Between Groups	4,632	1	4,632	3,130	0,078
	Within Groups	369,924	250	1,480		
	Total	374,556	251			

customers						
The hope of future contracts motivates us to sign long-term contracts with customers	Between Groups	12,409	1	12,409	8,857	0,003
	Within Groups	350,270	250	1,401		
	Total	362,679	251			
The possibility of knowing the expected order volume motivates us to sign long-term contracts with customers	Between Groups	10,792	1	10,792	7,171	0,008
	Within Groups	374,722	249	1,505		
	Total	385,514	250			
Knowledge of expected quality requirements motivates us to sign long-term contracts with customers	Between Groups	4,380	1	4,380	3,051	0,082
	Within Groups	353,164	246	1,436		
	Total	357,544	247			
The possibility of joint development motivates us to sign long-term contracts with customers	Between Groups	8,502	1	8,502	5,597	0,019
	Within Groups	376,762	248	1,519		
	Total	385,264	249			
The possibility of forming a common strategy motivates us to sign long-term contracts with customers	Between Groups	7,060	1	7,060	4,477	0,035
	Within Groups	392,701	249	1,577		
	Total	399,761	250			
Flexible ordering within the framework of the contract motivates us to sign long-term contracts with suppliers	Between Groups	4,711	1	4,711	2,966	0,086
	Within Groups	392,349	247	1,588		
	Total	397,060	248			

Values of the operative motives of customer contracts factor

Manufacturing sector		N	Mean	Std. Deviation
no	VFACMUK	114	-0,157	1,007
	Valid N (listwise)	114		
yes	VFACMUK	126	0,141	0,996
	Valid N (listwise)	126		

Values of the individual variables of the operative motives of customer contracts factor

Manufacturing sector		N	Mean	Std. Deviation
no	Stable gross sales revenue	119	3,59	1,38
	Stable utilisation of capacity	118	3,66	1,37
	Plannable contracts	119	3,13	1,24
	Future contracts	119	3,13	1,21
	Knowledge of expected order volume	119	3,17	1,28
	Cost reduction	119	3,14	1,29
	Valid N (listwise)	118		
yes	Stable gross sales revenue	132	3,84	1,18
	Stable utilisation of capacity	133	3,98	1,18
	Plannable contracts	133	3,41	1,19
	Future contracts	133	3,58	1,16
	Knowledge of expected order volume	132	3,58	1,18
	Cost reduction	133	3,27	1,33
	Valid N (listwise)	131		

Values of the co-operation motives of customer contracts factor

Manufacturing sector		N	Mean	Std. Deviation
no	SFACEGYU	118	-0,113	0,999
	Valid N (listwise)	118		
yes	SFACEGYU	121	0,068	1,001
	Valid N (listwise)	121		

Values of the individual variables of the co-operation motives of customer contracts factor

Manufacturing sector		N	Mean	Std. Deviation
no	Joint development activities	120	2,66	1,25
	Flexible ordering within the framework of the contract	119	3,11	1,29
	Common strategy	120	2,58	1,26
	Valid N (listwise)	118		
yes	Joint development activities	127	2,77	1,26
	Flexible ordering within the framework of the contract	130	3,38	1,23
	Common strategy	129	2,71	1,19
	Valid N (listwise)	127		

7.2. The subsample of commercial companies

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	5,535	1	5,535	5,524	0,020
	Within Groups	238,473	238	1,002		
	Total	244,008	239			
VFACEGYU	Between Groups	0,227	1	0,227	0,221	0,639
	Within Groups	244,297	238	1,026		
	Total	244,524	239			
VFACPIAC	Between Groups	0,039	1	0,039	0,040	0,842
	Within Groups	234,355	238	0,985		
	Total	234,394	239			
SFACMUK	Between Groups	1,663	1	1,663	1,639	0,202
	Within Groups	240,444	237	1,015		
	Total	242,107	238			
SFACEGYU	Between Groups	0,079	1	0,079	0,078	0,780
	Within Groups	239,077	237	1,009		
	Total	239,156	238			
SFACPIAC	Between Groups	4,039	1	4,039	4,171	0,042
	Within Groups	229,519	237	0,968		
	Total	233,558	238			
Stable gross sales revenue motivates us to sign long-term contracts with customers	Between Groups	4,894	1	4,894	2,990	0,085
	Within Groups	407,584	249	1,637		
	Total	412,478	250			
Stable utilisation of capacity motivates us to sign long-term contracts with customers	Between Groups	18,399	1	18,399	11,730	0,001
	Within Groups	390,573	249	1,569		
	Total	408,972	250			

The hope of future contracts motivates us to sign long-term contracts with customers	Between Groups	4,475	1	4,475	3,123	0,078
	Within Groups	358,204	250	1,433		
	Total	362,679	251			
The possibility of knowing the expected order volume motivates us to sign long-term contracts with customers	Between Groups	4,864	1	4,864	3,182	0,076
	Within Groups	380,650	249	1,529		
	Total	385,514	250			
The possibility of joint development motivates us to sign long-term contracts with customers	Between Groups	6,735	1	6,735	4,412	0,037
	Within Groups	378,529	248	1,526		
	Total	385,264	249			
Gaining advantage over competitors motivates us to sign long-term contracts with some suppliers	Between Groups	5,882	1	5,882	3,265	0,072
	Within Groups	445,017	247	1,802		
	Total	450,900	248			

7.3. The subsample of service companies

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VFACMUK	Between Groups	3,6226669	1	3,623	3,587	0,059
	Within Groups	240,38503	238	1,010		
	Total	244,0077	239			
VFACEGYU	Between Groups	0,1407582	1	0,141	0,137	0,712
	Within Groups	244,38295	238	1,027		
	Total	244,5237	239			
VFACPIAC	Between Groups	1,6788687	1	1,679	1,717	0,191
	Within Groups	232,71516	238	0,978		
	Total	234,39403	239			
SFACMUK	Between Groups	0,3832481	1	0,383	0,376	0,540
	Within Groups	241,72415	237	1,020		
	Total	242,1074	238			
SFACEGYU	Between Groups	0,007187	1	0,007	0,007	0,933
	Within Groups	239,14839	237	1,009		
	Total	239,15557	238			
SFACPIAC	Between Groups	9,444E-06	1	0,000	0,000	0,998
	Within Groups	233,55777	237	0,985		
	Total	233,55778	238			
Stable gross sales revenue motivates us to sign long-term contracts with customers	Between Groups	11,357492	1	11,357	7,050	0,008
	Within Groups	401,1206	249	1,611		
	Total	412,47809	250			
Stable utilisation of capacity motivates us to sign long-term contracts with customers	Between Groups	6,4685882	1	6,469	4,002	0,047
	Within Groups	402,50352	249	1,616		
	Total	408,97211	250			
The possibility of plannable contracts motivates us to sign long-term contracts with customers	Between Groups	4,1984127	1	4,198	2,834	0,094
	Within Groups	370,35714	250	1,481		
	Total	374,55556	251			
The exclusion of competitors motivates us to sign long-term contracts with customers	Between Groups	9,1391337	1	9,139	5,029	0,026
	Within Groups	450,70487	248	1,817		
	Total	459,844	249			

Values of the operative motives of customer contracts factor

Service sector		N	Mean	Std. Deviation
no	VFACMUK	214	-0,0432	1,041
	Valid N (listwise)	214		
yes	VFACMUK	26	0,3521	0,616
	Valid N (listwise)	26		

Values of the individual variables of the operative motives of customer contracts factor

Service sector		N	Mean	Std. Deviation
no	Stable gross sales revenue	223	3,65	1,31
	Stable utilisation of capacity	223	3,78	1,31
	Plannable contracts	224	3,23	1,24
	Future contracts	224	3,34	1,22
	Knowledge of expected order volume	223	3,39	1,25
	Cost reduction	224	3,19	1,32
	Valid N (listwise)	221		
yes	Stable gross sales revenue	28	4,32	0,90
	Stable utilisation of capacity	28	4,29	0,94
	Plannable contracts	28	3,64	0,99
	Future contracts	28	3,61	0,99
	Knowledge of expected order volume	28	3,39	1,20
	Cost reduction	28	3,39	1,23
	Valid N (listwise)	28		

Annex 8 – Results of the regression analysis

Operative motives of customer contracts factor

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,224	0,050	0,031	0,921

a Predictors: (Constant), SZOLG, BEL75, FELD

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,5362375	3	2,179	2,567	0,057
	Residual	123,91202	146	0,849		
	Total	130,44826	149			

a Predictors: (Constant), SZOLG, BEL75, FELD

b Dependent Variable: VFACMUK

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-0,318	0,167		-1,907	0,058
	BEL75	0,290	0,153	0,155	1,891	0,061
	FELD	0,333	0,169	0,177	1,964	0,051
	SZOLG	0,515	0,260	0,180	1,981	0,049

a Dependent Variable: VFACMUK

Co-operation motives of customer contracts factor

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,231	0,053	0,034	0,962

a Predictors: (Constant), ALLAM75, KUL75, BEL75

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7,864662	3	2,622	2,834	0,040
	Residual	139,67353	151	0,925		
	Total	147,53819	154			

a Predictors: (Constant), ALLAM75, KUL75, BEL75

b Dependent Variable: VFACEGYU

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-0,595	0,248		-2,398	0,018
	ALLAM75	0,733	0,312	0,281	2,350	0,020
	KUL75	0,850	0,298	0,360	2,850	0,005
	BEL75	0,630	0,271	0,322	2,327	0,021

a Dependent Variable: VFACEGYU

Annex 9 – Results of the cluster analysis

9.1. Motivating factors of clusters

		Sample	Indifferent companies		Supplier-oriented companies		Operations-oriented companies		Co-operating companies		Buyer market-oriented companies	
		N=226	N=29		N=45		N=41		N=75		N=36	
		Mean	Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.
Cusotmer	Stable gross sales revenue	3,74	1,79	-1,95	4,20	0,46	4,32	0,58	4,16	0,42	3,19	-0,54
	Stable utilisation of capacity	3,85	1,90	-1,95	4,40	0,55	4,12	0,28	4,31	0,46	3,44	-0,40
	Plannable contracts	3,24	1,48	-1,76	3,47	0,22	3,46	0,22	3,73	0,49	3,11	-0,13
	Future contracts	3,40	1,72	-1,67	3,60	0,20	3,56	0,16	3,73	0,34	3,61	0,21
	Knowledge of expected order volume	3,38	1,48	-1,90	3,82	0,44	3,56	0,18	3,79	0,40	3,33	-0,05
	Cost reduction possibilities	2,76	1,66	-1,10	3,58	0,82	3,24	0,49	3,79	1,03	3,03	0,27
	Joint development possibilities	2,72	1,45	-1,27	2,89	0,17	1,88	-0,84	3,40	0,68	3,31	0,58
	Joint problem solving	2,74	1,55	-1,19	3,07	0,33	1,56	-1,18	3,47	0,73	3,00	0,26
	Common strategy	2,96	1,48	-1,48	2,62	-0,34	1,66	-1,30	3,69	0,73	3,14	0,18
	Flexible contracting	2,75	1,59	-1,16	3,22	0,47	2,34	-0,41	3,73	0,99	2,83	0,09
	Customer insists on contract	3,00	1,34	-1,65	2,76	-0,24	2,51	-0,48	2,89	-0,10	3,83	0,84
	Exclusion of competitors	3,25	1,45	-1,80	3,51	0,26	3,02	-0,23	3,11	-0,15	3,33	0,08
Supplier	Predictable purchasing costs	3,88	2,41	-1,46	4,36	0,48	4,15	0,27	4,20	0,32	3,47	-0,40
	Reliable supply	4,19	3,00	-1,19	4,53	0,34	4,41	0,22	4,45	0,26	3,94	-0,25
	Plannable contractual conditions	3,73	2,14	-1,59	3,89	0,16	3,90	0,17	4,20	0,47	3,64	-0,09
	Cost reduction possibility	2,84	2,10	-0,74	4,47	1,63	3,59	0,74	3,97	1,13	3,28	0,44
	The desire to keep the supplier	2,75	1,83	-0,92	2,02	-0,73	2,66	-0,09	3,87	1,12	2,75	0,00
	Known supplier	2,76	1,97	-0,80	1,84	-0,92	2,66	-0,10	3,60	0,84	2,83	0,07
	Joint development possibilities	3,29	1,86	-1,43	3,09	-0,20	1,71	-1,58	3,52	0,23	2,69	-0,59
	Flexible contracts	2,69	1,90	-0,79	3,98	1,29	2,71	0,02	3,80	1,11	3,14	0,45
	Common strategy	3,65	1,55	-2,10	3,16	-0,49	1,66	-1,99	3,56	-0,09	2,39	-1,26

9.2. Performance indicators of clusters

	Sample	Indifferent companies		Supplier-oriented companies		Operations-oriented companies		Co-operating companies		Buyer market-oriented companies	
	N=226	N=29		N=45		N=41		N=75		N=36	
	Mean	Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.
Profit margin on sales	2,95	3,04	0,09	2,91	-0,04	2,76	-0,19	3,00	0,05	3,03	0,08
Return on capital	2,91	2,88	-0,03	2,91	0,00	2,68	-0,23	3,01	0,10	2,97	0,06
Market share	3,17	2,96	-0,21	3,32	0,15	3,03	-0,14	3,23	0,06	3,18	0,01
Technological standard	3,45	3,48	0,03	3,52	0,07	3,39	-0,05	3,39	-0,06	3,52	0,07
Management	3,48	3,48	0,00	3,41	-0,07	3,53	0,04	3,53	0,05	3,42	-0,06
Product quality	3,78	3,78	-0,01	3,75	-0,03	3,79	0,01	3,76	-0,03	3,88	0,10

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